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Articles

Environmens Rea

Anthony Moffa*

ABSTRACT

Many policymakers remain blind to the moral implications of environmental harm caused by government action (or inaction) and have not adequately considered how criminal law deals with similar immoral behavior in other contexts. Building from Lisa Heinzerling's thought-provoking essay *Knowing Killing and Environmental Law*, this article considers the possibility of criminal culpability for environmental policy decisions and the implications of that potential culpability for decision-making and communication. It builds from the premise that morality and law universally condemn the knowing killing of other human beings. It matters not that the identities of the dead are unknown. What matters from the perspective of the criminal law is whether the actor causing their deaths possessed the requisite level of mens rea. Thus, the lens of the criminal law concept of intent can be used to examine the choices we, as a society, make in designing environmental policy. This perspective can be informed not only by the basic principles of criminal law but also by recent developments in criminology, the law of corporate and

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environmental crime, and relevant historical precedent. This article makes the case that the criminal law mode of analysis could prove useful to prosecutors and policymakers. Ultimately, the article will apply this theoretical framework to environmental policy decisions currently challenging local, state, and national governments.

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I. INTRODUCTION

[W]e cannot fail to consider the effects on people's lives of environmental deterioration, current models of development and the throwaway culture. — Pope Francis¹

[T]aking a stand against climate change is a moral obligation. — President Barack Obama²

1. POPE FRANCIS, ENCYCLICAL LETTER LAUDATO SI' OF THE HOLY FATHER FRANCIS ON CARE FOR OUR COMMON HOME para. 43 (2015), http://w2.vatican.va/content/dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf.

Prosperity will mean little if we leave to future generations a world of polluted air, toxic lakes and rivers, and vanished forests. — President George W. Bush³

As prominent contemporary world leaders have acknowledged, the government has a moral obligation to care for the environment. Many have debated whether the fundamental source of that moral obligation is the worth of humans or the independent worth of all living things, but, regardless of whether non-human living things have independent moral relevance, the effects of a deteriorating environment on human health imbue any decision relating to it with at least some degree of moral weight. This weight comes from a foundational premise of morality that frowns upon the intentional taking of human life.⁴ And it matters not whether that life is a named individual with whom the perpetrator is well-acquainted⁵ or some indeterminate person in a remote location.⁶ Thus, at a minimum, immorality would seem to attach to actions that affect the environment to such a degree that human beings are killed as a result. Is the criminal law of our society meant to codify general conceptions of morality? If so, should the general criminal law apply to action (or inaction) that concerns the environment, at the very least when that action results in the loss of human life?

An initial difficulty to answering these rhetorical inquiries arises because actions affecting the environment on the scale necessary to affect human lives are generally carried out not by individuals but by corporate and government entities. The question of criminal culpability for entities, rather than individual persons, has been a subject of examination and debate for quite some time. In response, the law devised the concepts of corporate personhood and vicarious liability, imposing

2. Barack Obama, President, U.S., Remarks by the President in Announcing the Clean Power Plan (Aug. 3, 2015), <https://obamawhitehouse.archives.gov/the-press-office/2015/08/03/remarks-president-announcing-clean-power-plan>.

3. GRAYDON CARTER, WHAT WE'VE LOST 129 (2004) (quoting a campaign speech by President George W. Bush).

4. See, e.g., *Exodus* 20:13 ("Thou shalt not kill.").

5. For example, in the 1990s, Lyle and Erik Menendez ("the Menendez brothers") were famously charged with, and convicted of, the murders of their parents. See generally DONALD A. DAVIS, BAD BLOOD: THE SHOCKING TRUE STORY BEHIND THE MENENDEZ KILLINGS (1994).

6. For example, from the 1970s to the 1990s, Theodore Kaczynski ("the Unabomber") mailed homemade explosive devices to, among others, university and airline officials, harming the recipients and many others at the locations where the bombs detonated. The focus on universities and airlines garnered him the moniker "Unabomber." He ultimately pleaded guilty to, and was convicted of, among other federal crimes, multiple counts of murder. See Federal Bureau of Investigation, *Famous Cases and Criminals: Unabomber*, FBI HISTORY, <https://www.fbi.gov/history/famous-cases/unabomber> (last visited Jan. 8, 2018).

criminal sanctions on corporations and their executive officers.⁷ However, with respect to environmental harms that result from a combination of corporate and government action, positive law has not yet created a functioning category of criminal culpability. This enduring gap is not for want of theory or applicable law from closely related contexts.

Criminologists have for years debated the contours of “state crime,” questioning whether only violations of international law deserve such designation or whether the term encompasses violations of domestic law, human rights law, or even social norms.⁸ The emerging concept of “Green Criminology” accounts for a “wide range of environmentally-related harms that exist in the world, especially compared to the [human centered] criminal harms to which criminology has been limited.”⁹ Green criminologists have embraced the synthesis concept of “state-corporate crime,” which essentially concerns itself with collusion and corruption between corporate and government actors.¹⁰ Through application of derivative frameworks, criminologists have argued that, *inter alia*, coal industry regulations (or lack thereof),¹¹ oil spills,¹² and global warming inaction¹³ constitute state-corporate crimes. One attorney has even advanced these theoretical criminological arguments as a plea to the United Nations to recognize “ecocide” as an international crime alongside genocide, crimes against humanity, war crimes, and crimes of aggression.¹⁴

7. See *N.Y. Cent. & Hudson River R.R. Co. v. United States*, 212 U.S. 481, 481 (1909) (“Congress can impute to a corporation the commission of certain criminal offenses and subject it to criminal prosecution therefor.”).

8. See DAWN L. ROTHE, *STATE CRIMINALITY* 4–6 (2009) (explaining the scholarly debate over the standards that define state crime).

9. MICHAEL J. LYNCH & PAUL B. STRETESKY, *EXPLORING GREEN CRIMINOLOGY: TOWARD A GREEN CRIMINOLOGICAL REVOLUTION* 6 (2014); see also Michael A. Long et al., *Crime in the Coal Industry: Implications for Green Criminology and Treadmill of Production*, 25 *ORG. & ENV'T* 328, 329 (2012) (“Green criminology has become a rapidly expanding area of study within criminology, promoting various green criminological frameworks.”).

10. See Michael J. Lynch et al., *Global Warming and State-Corporate Crime: The Politicalization of Global Warming Under the Bush Administration*, 54 *CRIME L. & SOC. CHANGE* 213, 216 (2010).

11. See Long et al., *supra* note 9, at 338–41.

12. See Tricia Cruciotti & Rick A. Matthews, *The Exxon Valdez Oil Spill*, in *STATE-CORPORATE CRIME: WRONGDOING AT THE INTERSECTION OF BUSINESS & GOVERNMENT* 149, 149–50 (Raymond J. Michalowski & Ronald C. Kramer eds., 2006) [hereinafter *STATE-CORPORATE CRIME*].

13. See Lynch et al., *supra* note 10, at 216; see also Ronald C. Kramer & Raymond J. Michalowski, *Is Global Warming a State-Corporate Crime?*, in *CLIMATE CHANGE FROM A CRIMINOLOGICAL PERSPECTIVE* 71, 71–72, 77–78 (Rob White ed., 2012).

14. See POLLY HIGGINS, *ERADICATING ECOCIDE: EXPOSING THE CORPORATE AND POLITICAL PRACTICES DESTROYING THE PLANET AND PROPOSING THE LAWS NEEDED TO*

The law has not yet been explicitly extended quite so far as these criminologists might want, but the idea of prosecuting entities for collective decisions that impose increased risk of death upon members of society is not as far-fetched as one might first imagine. In the 1970s, one of the iconic American companies—Ford Motor Company—faced criminal prosecution for the infamous design of the Pinto (“the Pinto case”).¹⁵ Ford was ultimately acquitted of the charges, which included recklessly causing the deaths of three women.¹⁶ The case illustrated the importance of intent (i.e., *mens rea*) as the distinguishing element between civil and criminal liability, and how a finding of criminal culpability based on some degree of knowledge (in this case, recklessness) could threaten to upend a tort system predicated on balancing of risks.¹⁷ The prominent tort scholar Richard Epstein cheered the result and cautioned against the infiltration of the criminal law into such risk management decision-making matters.¹⁸

Thirty years later, in a thought-provoking essay (and speech) making a case against cost-benefit analysis, another prominent scholar, Lisa Heinzerling, “defend[ed] the view that the moral commitment against knowing killing should play a role in decisions about environmental problems.”¹⁹ This article will serve as an extension of that defense by specifically arguing for a role for criminal prosecution of government entities in limited circumstances, and, perhaps more importantly, for the use of criminal law concepts in the analysis of environmental policy options and public engagement efforts. These initial prescriptions recognize that though the lens of criminal culpability will prove useful in many circumstances, actually holding a government entity criminally accountable for its action (or inaction) presents complications.²⁰ Hence, this article will begin to outline the narrow

ERADICATE ECOCIDE 63 (2010) (defining ecocide as “the extensive destruction, damage to or loss of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished”).

15. See Grand Jury Indictment, *State v. Ford Motor Co.*, No. 5324 (Ind. Super. Ct. Sept. 13, 1978).

16. See Richard A. Epstein, *Is Pinto a Criminal?*, REG.: AEI J. ON GOV'T & SOC'Y, Mar./Apr. 1980, at 15, 16.

17. *Id.* at 20 (“It cannot—should not—be the law that Ford may first be permitted (if not required) to make certain cost-benefit calculations under the tort law, only then and for that reason to be held guilty of reckless homicide under the criminal law.”).

18. See *id.* at 20–21.

19. Lisa Heinzerling, *Knowing Killing and Environmental Law*, 14 N.Y.U. ENVTL. L.J. 521, 521 (2006).

20. As scholars have noted, the Department of Justice charging other government entities with crimes presents complications that should not be undertaken lightly. See Stuart P. Green, *The Criminal Prosecution of Local Governments*, 72 N.C. L. REV. 1197, 1215 n.107 (1994).

circumstances under which actual criminal prosecution might be used against a government entity as a tool of direct action.²¹ As others have noted, the possibility of the Department of Justice charging another agency or government entity with a crime is indeed real and may be justified as a matter of policy.²² Such a charge may not represent the best option, but it is an available, and thus far underutilized, tool.

With advances in risk assessment and modeling technology, the information available to policy and decision-makers has increased exponentially in detail and accuracy. It is now possible to predict within a reasonable degree of certainty the number of indeterminate persons whose deaths would result (or be prevented) under each of a number of possible decision scenarios.²³ With the great power of such tools comes the great moral (and legal) responsibility for the consequences of decisions. While neither Professor Heinzerling nor this article advocate for the prosecution through the criminal justice system of all government and corporate actors whose decisions result in the loss of statistical lives, society has reached a level of technological sophistication such that the moral weight (and possible criminal culpability) of choosing among policy options can no longer be ignored.

This insight comes at a time when social science is at an important crossroads regarding policy communication. Professor Dan Kahan's research has exposed the false assumption that many political communicators operate on, which he calls the "Public Irrationality Thesis (PIT)."²⁴ Kahan and his team's findings suggest that, despite what many who espouse PIT believe, improving public access to, and understanding of, scientific information is not likely to significantly increase support for

21. See *infra* Section V.A.

22. See Green, *supra* note 20, at 1215 n.107 (explaining that such a prosecution would face some obvious objections and noting the existence of "problems inherent in 'self-prosecution'").

23. See, e.g., U.S. ENVTL. PROT. AGENCY, REGULATORY IMPACT ANALYSIS FOR THE FINAL MERCURY AND AIR TOXICS STANDARDS 5-10 (2011), <https://www3.epa.gov/ttnecas1/regdata/RIAs/matsriafinal.pdf>. According to this report:

PC-based tools such as the environmental Benefits Mapping and Analysis Program (BenMAP) can systematize health impact analyses by applying a database of key input parameters, including health impact functions and population projections. Analysts have applied the HIA approach to estimate human health impacts resulting from hypothetical changes in pollutant levels EPA and others have relied upon this method to predict future changes in health impacts expected to result from the implementation of regulations affecting air quality

Id. (citations omitted).

24. See, e.g., Dan M. Kahan, *Making Climate-Science Communication Evidence-Based—All the Way Down*, in CULTURE, POLITICS AND CLIMATE CHANGE 203, 205-07 (Maxwell Boykoff & Desarai Crow eds., 2014).

environmental protection.²⁵ Instead, Kahan and his team found support for Kahan's "cultural cognition" thesis, which posits that individuals form views on environmental risks and policies based on how those views connect them to others who share their cultural values.²⁶ Combatting crime relates differently to the shared cultural values of most groups than does environmental protection.²⁷ Thus, by reframing bad environmental actions as potential crimes, policy communicators might reach new and unexpected groups.

As initially highlighted, there can be no discussion of this topic if criminal culpability can only attach to an individual and not an entity. Therefore, Part II will first examine how the criminal law and criminologists have handled the issue of personhood with respect to corporate and government entities.²⁸ Next, this Part will address the legitimacy of a defense available to governments, but not corporations—sovereign immunity.²⁹ Part III will explain the various levels of intent recognized by criminal law and how those levels of intent translate to entity liability.³⁰ It will debate the relative merits of charging individuals versus charging entities, and will provide examples, including a discussion of the Flint, Michigan water crisis prosecution as a test case.³¹ Part IV will lay out the implications of the previously discussed principles of criminal intent in the context of pervasive and accurate environmental information.³² Part V will provide the beginnings of frameworks for how prosecutors and policymakers might make use of the criminal liability perspective.³³ Part VI will apply the lens of potential criminal liability to pressing contemporary decisions of environmental policy around climate change, air pollution, and the water crisis in Flint.³⁴

25. See *id.*; see also Dan M. Kahan et al., *The Polarizing Impact of Science Literacy and Numeracy on Perceived Climate Change Risks*, 2 NATURE CLIMATE CHANGE 732, 734–35 (2012).

26. See Dan M. Kahan, *Cultural Cognition as a Conception of the Cultural Theory of Risk*, in 2 HANDBOOK OF RISK THEORY: EPISTEMOLOGY, DECISION THEORY, ETHICS, AND SOCIAL IMPLICATIONS OF RISK 725, 730 (Sabine Roeser, Rafaela Hillerbrand, Per Sandin & Martin Peterson eds., 2012).

27. See Dan M. Kahan & Donald Braman, *Cultural Cognition and Public Policy*, 24 YALE L. & POL'Y REV. 149, 163 (2006) ("Our cultural worldview scales were much stronger predictors of opinions on environmental issues, crime control issues, and economic regulatory issues than were ideological and party affiliation measures.").

28. See *infra* Section II.A.

29. See *infra* Section II.B.

30. See *infra* Section III.A.

31. See *infra* Sections III.B–.D.

32. See *infra* Part IV.

33. See *infra* Part V.

34. See *infra* Part VI.

II. STATE AND CORPORATE PERSONHOOD AND CRIMINALITY

Criminal liability for government entities begins with the question of entity liability more broadly, which sets the stage for later discussion of the similarities and differences between corporate and government entities. The important principles that allow for corporate criminal liability apply with equal force to government bodies. Though differences exist in the purposes, nature, and operation of corporate and government entities, this Part will demonstrate why these distinctions do not change the application of the criminal law, except, perhaps, with respect to the potential availability of the sovereign immunity defense.

A. Of Governments, Corporations, and People

The United States justice system has for many years recognized that corporations (i.e., groups of individuals formally organized to enjoy certain legal protections) should not be immune from criminal prosecution.³⁵ Corporations consist of individuals who themselves might commit crimes, but also have the potential to commit criminal acts collectively. That underlying rationale comes easily. However, the practical difficulties of corporate criminal liability persist. While acknowledging that the corporation can be the most responsible (in other words, culpable) actor,³⁶ and thereby be subject to fines, the law also makes imprisonment of “responsible corporate officer[s]” available.³⁷ In recent years, the Supreme Court has signaled an increasing willingness to recognize corporate personhood for the purposes of various kinds of legal protections and obligations.³⁸ And after an era marked by deferred prosecutions, the federal government in 2014 and 2015 initiated historic prosecutions against a number of large banking corporations, including Credit Suisse, JP Morgan Chase, Citicorp, and Barclays.³⁹

Despite its treatment of corporate entities, the law has not yet expanded to accommodate criminal liability for the most important type of government entity (i.e., the state itself), except in rare circumstances. International law criminalizes certain, particularly egregious, state

35. See, e.g., *N.Y. Cent. & Hudson River R.R. Co. v. United States*, 212 U.S. 481, 494–96 (1909).

36. See *United States v. Dotterweich*, 320 U.S. 277, 284 (1943) (finding that, under the Federal Food, Drug, and Cosmetic Act, a corporation may commit the offense, but individual officers who aid and abet its commission could, depending on the evidence, be equally guilty).

37. See, e.g., *United States v. Ming Hong*, 242 F.3d 528, 531, 534 (4th Cir. 2001).

38. See, e.g., *Citizens United v. FEC*, 558 U.S. 310, 342 (2010) (recognizing corporate personhood for purpose of free speech protection).

39. David M. Uhlmann, *The Pendulum Swings: Reconsidering Corporate Criminal Prosecution*, 49 U.C. DAVIS L. REV. 1235, 1238 (2016).

conduct,⁴⁰ but for actions that do not rise to the level of direct violations of international obligations (e.g., treaty provisions), the criminal justice system provides little recourse against the state.

Setting aside the defense of sovereign immunity as a significant practical difference between government and corporate entity liability,⁴¹ from the perspective of criminological theory, once one embraces the idea that entities, like the individuals that comprise them, can have rights, obligations, and mental states that subject them to criminal law, it is difficult to explain how the state does not qualify as such an actor. Indeed, criminologists developed the theories of state and corporate criminality somewhat in concert.⁴² Since that time there has been much quibbling over the definitional contours of state crime, but it is now widely acknowledged as a legitimate concept and field of study. Though no one universal definition prevails, a coherent synthesis definition describes state crime as “[a]ny action that violates international public law and/or a state’s own domestic law when these actions are committed by individual actors acting on behalf of, or in the name of the state, even when such acts are motivated by their personal economic, political, and ideological interests.”⁴³ Among the potential types of state crime are “state-corporate crime, crimes of globalization, political crime, and environmental crime.”⁴⁴ These categories encompass “actions that are immoral or unethical and which exist at the edge of crime, involving actions that violate the spirit of governance.”⁴⁵

“State-corporate crime” describes the situation where a public entity coordinates with one or more private entities to accomplish a common

40. See ROTHE, *supra* note 8, at 3 (tracing criminal liability for states back to the mid-1900s).

41. See *infra* Section II.B.

42. See ROTHE, *supra* note 8, at 12.

43. *Id.* at 6.

44. *Id.* at 12. “Environmental crime,” as the term is used in the study of state criminology, refers to intentional harm to the environment, not necessarily harm to persons by way of harm to the environment. See *id.* at 24. Criminality in this context derives from the violation of international treaties that prohibit certain actions, such as trade in endangered species or dumping of toxic waste at sea. See *id.* at 25. So defined, this concept has less utility for the purposes of this work, because it does not implicate most of the environmental policy decisions currently being debated in the United States and it lacks the moral weight of intentional killing. State environmental crime thus supports the analysis in much the same way that corporate environmental crime does—it provides evidence that entity criminal liability is possible in the environmental law context.

45. Lynch et al., *supra* note 10, at 215–16.

objective through cooperative illegal activity.⁴⁶ Specifically, state-corporate crime is defined as:

[I]llegal or socially injurious actions that result from a mutually reinforcing interaction between (1) policies and/or practices in pursuit of the goals of one or more institutions of political governance and (2) policies and/or practices in pursuit of the goals of one or more institutions of economic production and distribution.⁴⁷

This concept lacks the breadth to address all of the harm-generating activity discussed herein, but goes notably further than the criminal law, as presently enforced, does. It acknowledges an important reality: in terms of moral agency, there is no meaningful distinction between groups of people based on the common purpose for which they are organized, be it governance, the generation of profit, or some other shared objective. What matters from an entity culpability standpoint is simply that a group of people are organized for a *common* purpose such that the entity itself functions as a social actor.⁴⁸ Both government agencies and corporations act under the auspices of such organizing principles, and society attributes the success, or failure, of said actions to the entity, more than any of the individuals who comprise it. The relative dearth of positive criminal law proscribing the activity of government entities formally perpetuates a distinction between types of entities, but any basis for the different treatment of government entities does not have its roots in the moral philosophy that underpins our criminal law. And since it is that moral underpinning that makes the criminal law relevant to environmental decision-making, there is no reason for excluding the decisions of government entities from scrutiny.

B. The Sovereign Elephant in the Room

It is important to pause here and briefly discuss what is meant by “the state” and how different levels of government (and their constituent parts) enjoy (or do not enjoy) the protection of sovereign immunity. Historically, local governments (including, but not limited to, “cities,

46. Kramer & Michalowski, *supra* note 13, at 76; Rob White & Ronald C. Kramer, *Critical Criminology and the Struggle Against Climate Change Ecocide*, 23 CRITICAL CRIMINOLOGY 383, 383 (2015).

47. Raymond Michalowski & Ronald Kramer, *The Critique of Power*, in STATE-CORPORATE CRIME, *supra* note 12, at 1, 15.

48. See ROTHE, *supra* note 8, at 3; see also Stephen Breyer, *On the Uses of Legislative History in Interpreting Statutes*, 65 S. CAL. L. REV. 845, 865 (1992) (“[A]scribing purposes to groups and institutions is a complex business, and one that is often difficult to describe abstractly. But that fact does not make such ascriptions improper. In practice, we ascribe purposes to group activities all the time without many practical difficulties.”).

municipal corporations, towns, boroughs, counties, townships, and parishes⁴⁹) were subject to prosecution under the laws of the state where they existed and under the federal law.⁵⁰ The Supreme Court in *City of Newport v. Fact Concerts, Inc.*⁵¹ introduced uncertainty into the question of local governments' potential immunity from prosecution.⁵² However, that case pertained to immunity from punitive damages in a private civil suit, and thus the door to criminal prosecution technically remains open—at least to the extent that the Supreme Court has not closed it.⁵³

Consequently, federal and state prosecutors could indict local governments, or parts thereof, for the actions described in this article.⁵⁴ But the power to indict does not seem to work both ways. In contrast to municipalities, federal and state governments theoretically enjoy the protection of sovereign immunity, especially from prosecutions initiated by local (non-federal) officials.⁵⁵ Because the crimes against human lives theorized herein implicate federal agencies, and to a lesser extent state

49. Green, *supra* note 20, at 1201 (describing this state of affairs as existing “[f]or more than a century and a half, from about 1819 until as late as 1975”).

50. *Id.*

51. *City of Newport v. Fact Concerts, Inc.*, 453 U.S. 247 (1981).

52. *Id.* at 263. According to the Supreme Court in *City of Newport*:

In general, courts viewed punitive damages as contrary to sound public policy, because such awards would burden the very taxpayers and citizens for whose benefit the wrongdoer was being chastised. The courts readily distinguished between liability to compensate for injuries inflicted by a municipality's officers and agents, and vindictive damages appropriate as punishment for the bad-faith conduct of those same officers and agents. Compensation was an obligation properly shared by the municipality itself, whereas punishment properly applied only to the actual wrongdoers. The courts thus protected the public from unjust punishment, and the municipalities from undue fiscal constraints.

Id. In the wake of *City of Newport*, some courts determined that local governments were incapable of forming mens rea, and thus immune from prosecution. See Green, *supra* note 20, at 1223–24. Prior to that time, some courts had held that municipalities were immune from prosecution when they were acting in a “governmental capacity” and were not immune when acting in a “proprietary capacity.” See *id.* at 1209. This distinction was ultimately abandoned as unworkable, with the usual solution being in favor of subjecting local governments to prosecution in all capacities. *Id.* at 1229.

53. See Green, *supra* note 20, at 1199 (arguing that when “local governments and their agencies intentionally adopt policies that authorize, encourage, or condone acts that are properly treated as criminal under federal law, those entities (rather than, or in addition to, the officials who work for them) can and, in some cases, should be criminally prosecuted”); *id.* at 1226 (“City of Newport and the RICO cases all involved immunity from damage actions brought by private plaintiffs. Such cases say little about immunity from criminal prosecutions brought by the federal government.”).

54. See *infra* Section VI.C.

55. See, e.g., *People v. Walters*, 751 F.2d 977, 978 (9th Cir. 1984) (affirming dismissal of criminal prosecution brought by City of Los Angeles against Veterans Administration in connection with the alleged disposal of hazardous medical wastes, on the grounds that there was no clear and unambiguous evidence that the federal government had waived its sovereign immunity to criminal sanctions).

agencies, more regularly than local governments,⁵⁶ it is imperative to understand the hurdle to prosecution that sovereign immunity potentially presents. It would undoubtedly be the first, and most powerful, line of defense employed by legal representation for the defendant agency if any such charges were filed.

The doctrine of sovereign immunity has its roots in English common law and the maxim “the king can do no wrong.”⁵⁷ In the United States, according to the revered Hart and Wechsler text, “[t]he doctrine developed largely in dicta, reflecting evidently a general professional opinion” that the government should not prosecute itself.⁵⁸ Over the years, the Supreme Court set out the conditions under which sovereign immunity provided a defense: where the prosecution is actually against the sovereign itself (rather than an individual or non-government entity) *and* seeks a remedy that would require the sovereign to act affirmatively to stop the harm that provides the basis for the charge.⁵⁹ Hence, in most instances, sovereign immunity protects federal and state government entities from prosecution unless Congress or a state legislature has provided an explicit waiver.

In the context of environmental crimes, some limited explicit waivers exist, though, in light of the courts’ treatment of those waivers, none likely sweep broadly enough to cover the type of general manslaughter charges proposed herein. In fact, Congress has provided a waiver of sovereign immunity in each of the major environmental statutes, authorizing civil fines and criminal prosecution against federal facilities that illegally pollute the environment.⁶⁰ Utilizing these waivers,

56. See Jonathan H. Adler, *Jurisdictional Mismatch in Environmental Federalism*, 14 N.Y.U. ENVTL. L.J. 130, 169 (2005) (describing “extensive federal involvement in areas best left in state or local hands”); Kirsten Engel, *State and Local Climate Change Initiatives: What Is Motivating State and Local Governments to Address a Global Problem and What Does This Say about Federalism and Environmental Law*, 38 URB. LAW. 1015, 1015 (2006) (describing “modern environmental law” as “federal environmental statutes and their implementation and enforcement by federal agencies,” while noting that “the common law has a role—especially common law nuisance actions—and states are important players in interpreting, applying, enforcing, and regulating beyond the scope of federal law”).

57. Rebecca Heintz, Note, *Federal Sovereign Immunity and Clean Water: A Supreme Misstep*, 24 ENVTL. L. 263, 266 (1994) (citing 1 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 238–39 (1st ed. 1765–1769)).

58. PAUL M. BATOR ET AL., HART AND WECHSLER’S THE FEDERAL COURT AND THE FEDERAL SYSTEM 1339 (2d ed. 1973).

59. *Dugan v. Rank*, 372 U.S. 609, 620 (1963) (determining that sovereign immunity attached when “the judgment sought would expend itself on the public treasury or domain, or interfere with the public administration” (quoting *Land v. Dollar*, 330 U.S. 731, 738 (1947))); *Larson v. Domestic & Foreign Commerce Corp.*, 337 U.S. 682, 687–89 (1949).

60. See, e.g., 33 U.S.C. § 1323(a) (2012); 42 U.S.C. §§ 6961(a), 7418(a), 9620(a)(1) (2012); see also J.B. Wolverton, *Sovereign Immunity and National Priorities: Enforcing*

state attorneys general have been able to assess penalties against the federal government for violating environmental statutes at federal facilities.⁶¹ However, courts have been inclined to read these explicit waivers very narrowly.⁶² Accordingly, it is unlikely that a court, state or federal, would interpret the statutory waivers of sovereign immunity for specific violations of environmental laws to permit prosecution of federal government entities for general crimes like murder, manslaughter, or negligent homicide.

There is nonetheless some reason to think that the doctrine of sovereign immunity would not stand up to scrutiny in the face of public outcry over governmental crimes. Many commentators have questioned the legitimacy or utility of the doctrine of sovereign immunity, particularly as it might apply to crimes committed by the government itself.⁶³ Put bluntly, no government should be above the law.⁶⁴ Modern commentators and current events have forced the acknowledgment that the government, though responsible for administering justice, is just as capable as a private actor of committing acts of injustice.⁶⁵ But the idea that the concept of sovereign immunity runs counter to our system of government is by no means new. In the 1970s, calls for the abandonment of the doctrine from the legal academy astutely pointed out that an inability to hold the government accountable for violations of law

Federal Facilities' Compliance with Environmental Statutes, 15 HARV. ENVTL. L. REV. 565, 577 (1991) (describing the waivers as consistent with the theory of moral responsibility on the part of the government for actions that violate its own laws).

61. See, e.g., *Ohio v. Dep't of Energy*, 904 F.2d 1058, 1062 (6th Cir. 1990) (determining for the first time, at the federal appellate court level, that states could assess penalties against polluting federal facilities under the federal facilities provision of the Clean Water Act, 33 U.S.C. § 1323).

62. See *id.* at 1063 (declining to hold that penalties were available to states under the federal facilities provision of the Resource Conservation and Recovery Act); see also Wolverton, *supra* note 60, at 574–76 (“[T]he Justice Department does not construe the Resource Conservation and Recovery Act’s waiver of immunity to encompass administrative orders or criminal sanctions.”).

63. See generally Erwin Chemerinsky, *Against Sovereign Immunity*, 53 STAN. L. REV. 1201 (2001); Vicki C. Jackson, *Suing the Federal Government: Sovereignty, Immunity, and Judicial Independence*, 35 GEO. WASH. INT’L L. REV. 521 (2003); John F. Manning, *The Eleventh Amendment and the Reading of Precise Constitutional Texts*, 113 YALE L.J. 1663 (2004); James E. Pfander, *Sovereign Immunity and the Right to Petition: Toward a First Amendment Right to Pursue Judicial Claims Against the Government*, 91 NW. U. L. REV. 899 (1997); Stacy Humes-Schulz, Note, *Limiting Sovereign Immunity in the Age of Human Rights*, 21 HARV. HUM. RTS. J. 105 (2008).

64. See Heintz, *supra* note 57, at 272 (“It cannot be seriously asserted that the federal government, as it exists today, should have the privilege of being above the law.”).

65. See Wolverton, *supra* note 60, at 577; see also Chemerinsky, *supra* note 63, at 1213–14.

undermines the rule of law itself.⁶⁶ One of the most prominent constitutional scholars of our day has even gone so far as to suggest that the doctrine of sovereign immunity may be unconstitutional.⁶⁷

The Supreme Court itself has struggled with the effectiveness of the doctrine as a defense to government malfeasance, repeatedly questioning and criticizing sovereign immunity's historical and logical roots. Justice Frankfurter notably remarked that the doctrine "undoubtedly runs counter to modern democratic notions of the moral responsibility of the State."⁶⁸ Before him, in his famous *Olmstead v. United States*⁶⁹ dissent, Justice Brandeis argued that the federal government should not be able to violate the criminal laws of the states with impunity.⁷⁰ Indeed, as early as *Marbury v. Madison*,⁷¹ in the Supreme Court's formative years, the Justices stressed the importance of providing a remedy for the government's violation of law, explicitly referencing the English procedures for seeking recourse against the King.⁷²

Put simply:

At a time when government departments and many independent corporations, directly or indirectly controlled by the government, assume an increasing variety of functions and responsibilities in the social and economic life of nations, the exemption of either government or government corporations from criminal liability generally is neither morally nor technically justified.⁷³

A brief analysis of the justifications for and application of the doctrine of sovereign immunity supports this contention.

66. See, e.g., Kenneth Culp Davis, *Sovereign Immunity Must Go*, 22 ADMIN. L. REV. 383, 384 (1970) ("To improve substantive justice, to enforce procedural justice, and to allocate functions efficiently, Congress should abolish nearly all of what is left of sovereign immunity.").

67. See generally Chemerinsky, *supra* note 63.

68. *Great N. Life Ins. Co. v. Read*, 322 U.S. 47, 59 (1944) (Frankfurter, J., dissenting).

69. *Olmstead v. United States*, 277 U.S. 438 (1928).

70. See *id.* at 485 (Brandeis, J., dissenting) ("If the government becomes a lawbreaker, it breeds contempt for law; it invites every man to become a law unto himself; it invites anarchy.").

71. *Marbury v. Madison*, 5 U.S. 137 (1803).

72. See *id.* at 163. According to the Court in *Marbury*:

The very essence of civil liberty certainly consists in the right of every individual to claim the protection of the laws, whenever he receives an injury. . . . In Great Britain the king himself is sued in the respectful form of a petition, and he never fails to comply with the judgment of his court. . . . The government of the United States has been emphatically termed a government of laws, and not of men. It will certainly cease to deserve this high appellation, if the laws furnish no remedy for the violation of a vested legal right.

Id.

73. WOLFGANG FRIEDMANN, *LAW IN A CHANGING SOCIETY* 211 (2d ed. 1972).

Modern defenders of sovereign immunity justify its continued legitimacy on two general grounds: (1) the government cannot sue itself (“the unitary executive” theory) and (2) the government should not be subject to the indignity and undue influence of prosecution.⁷⁴ As to the former justification, the Department of Justice has officially embraced the unitary executive theory and maintained that it cannot prosecute other branches of the federal government.⁷⁵ The Supreme Court, however, has never officially endorsed this theory.⁷⁶ The Supreme Court has actually declined to give weight to the Department of Justice’s view, finding that the “Take Care” Clause of the Constitution⁷⁷ did not empower the executive branch to prohibit enforcement of the law against itself.⁷⁸ The statements of the Justices described above concerning the necessity to the rule of law of holding violators accountable, regardless of connection to the government, suggest that the Supreme Court would have some difficulty embracing the unitary executive theory. As to the justification that sovereign immunity insulates the government from the indignity of prosecution and the influence of prosecutors and courts, history suggests that this concern has not consistently weighed on the minds of judges applying the doctrine.⁷⁹

Thus, if a court were confronted with an indictment charging a federal or state agency with implementing environmental policy in a criminally culpable way, there exists some real question as to whether sovereign immunity could effectively be wielded as a defense. The political treatment of violations of environmental law by federal government entities gives some additional weight to the idea that sovereign immunity would not provide an acceptable defense. For example, when the scope of the waivers in federal environmental statutes was still up for debate, President Bush gave a campaign speech in which he stated, “[u]nfortunately, some of the worst [environmental] offenders are our own federal facilities. As President, I will insist that in the future federal agencies meet or exceed environmental standards. The

74. See Heintz, *supra* note 57, at 265, 272, 281.

75. *Id.* at 281 (citing Mark J. Conner, *Government Owned-Contractor Operated Munitions Facilities: Are They Appropriate in the Age of Strict Environmental Compliance and Liability?*, 131 MIL. L. REV. 1, 22 (1991)).

76. Wolverson, *supra* note 60, at 570. *But see* *Kawananakoa v. Polyblank*, 205 U.S. 349, 353 (1907) (“A sovereign is exempt from suit, not because of any formal conception or obsolete theory, but on the logical and practical ground that there can be no legal right as against the authority that makes the law on which the right depends.”).

77. U.S. CONST. art. II, § 3 (“[The President] shall take Care that the Laws be faithfully executed . . .”).

78. See *Kendall v. United States ex rel. Stokes*, 37 U.S. 524, 610 (1838) (“[D]uty and responsibility grow out of and are subject to the control of the law, and not the direction of the President.”).

79. Heintz, *supra* note 57, at 265.

government should live within the laws it imposes on others.”⁸⁰ The criminal code constitutes perhaps the most important set of such laws.

Furthermore, the current prevailing thinking—wherein government officials, protected only by *qualified* immunity,⁸¹ can be subject to prosecution for their individual actions,⁸² while the entity they work for enjoys *complete* immunity—creates some problems of its own. Without immunity for government entities, “[t]he question of whether the agency, the government official, or both, should be criminally liable mirrors the question of whether, in corporate liability, a corporation or the responsible employee should be liable.”⁸³ However, immunity makes that analysis irrelevant, and thus incentivizes prosecution of individuals in the government rather than the entities they represent, even when those entities are in fact culpable. This system disproportionately punishes government workers, and disincentivizes participation in government. Perhaps worse, it can leave victims without an acceptable remedy and perpetuate an injustice indefinitely.⁸⁴ In current practice, government officials, particularly in administrative agencies, are given wide breadth in their official mandates and significant deference by the courts, shielding them from personal liability;⁸⁵ hence, the negative incentives to government service have had little observed effect, but the absence of recourse to those harmed by the government persists.⁸⁶ If this enforcement gap prompts action against individuals, prosecutors and

80. Wolverton, *supra* note 60, at 587 (quoting Rochelle L. Stanfield, *It's Hip to Be Clean*, 20 NAT'L J. 1510, 1510 (1988)) (“Virtually all parties agree in theory that federal facilities should be accountable for pollution in the same degree as private parties.”).

81. For a fuller account of the contours and limits of immunity for government officials charged with crimes, see generally Seth P. Waxman & Trevor W. Morrison, *What Kind of Immunity? Federal Officers, State Criminal Law, and the Supremacy Clause*, 112 YALE L.J. 2195 (2003).

82. Of course, outside the realm of criminal prosecution, suits against government officials seeking injunctive relief from enforcement of an allegedly unconstitutional state law are not barred by sovereign immunity. See *Ex parte Young*, 209 U.S. 123, 155–56 (1908).

83. Michael G. Faure, Ingeborg M. Koopmans & Johannes C. Oudijk, *Imposing Criminal Liability on Government Officials Under Environmental Law: A Legal and Economic Analysis*, 18 LOY. L.A. INT'L & COMP. L.J. 529, 563 (1996).

84. Cf. *id.* at 534 (describing the “major difference [that] exists between the duties that government officials and private individuals owe” and pointing out that “personal liability may paralyze the initiative of government officials” and can be “unfair, as is imposing a duty to indemnify tort victims from the official’s personal resources”).

85. For a counter-example, see Germany, where the “Criminal Code does not specifically hold government officials criminally liable for failing to execute their duties in environmental protection, [but] such a failure may constitute an environmental crime.” See *id.* at 538.

86. See *id.* at 546 (“In view of the deference criminal courts give to the official’s discretionary powers, the extent of liability to which officials are presently exposed is not great enough to cause the suggested counterproductive effects.”).

executive branch officials will ultimately have to confront the question of government entity liability as well.

III. INTENT IN CRIMINAL LAW

Having answered in the affirmative the foundational query of whether or not the criminal law even applies to government entities, this Part turns to the details of how the intent element of a crime can be satisfied by actors other than individual persons. Embedded within this analysis is the intuition that proving the state of mind of an individual is easier than proving the state of mind of a collective (i.e., an organization of any kind). This intuition has manifested in a philosophical and political debate about whether to charge individuals, entities, or both. It has also borne out in practice, with many individuals ultimately taking the brunt of criminal punishment for environmental harms (in the relatively rare instances in which such harms are prosecuted).

A. *The Many Faces of Criminal Intent*

The assumed universal ethical principle at the heart of this article is that the intentional taking of another human life is wrong. This principle provides the basis for the criminal law of murder and manslaughter, among other related crimes, across the United States.⁸⁷ The criminal law attaches culpability to the taking of another life based upon the level of intention (mens rea) with which said life is taken. The Model Penal Code sets out four different levels of mens rea: purpose,⁸⁸ knowledge,⁸⁹ recklessness,⁹⁰ and negligence.⁹¹ With respect to the taking of human life, the crimes that correspond to each level of intention go by varying names in different states—with intentional or knowing killing generally referred to as murder or homicide in the first and second degree, and

87. Cf. Morris R. Cohen, *Moral Aspects of the Criminal Law*, 49 YALE L.J. 987, 992–94 (1940) (explaining how moral intuition is often cited as the basis for criminal law, particularly by Kant).

88. A person acts purposefully (intentionally) if he acts with the intent that his action cause a certain result. See MODEL PENAL CODE § 2.02(2)(a) (AM. LAW INST. 1962). In other words, the defendant undertakes his action either intending for, or hoping that, a certain result will follow. *Id.*

89. A person acts knowingly if he is aware that his conduct will result in certain consequences. See *id.* § 2.02(2)(b). In other words, a person acts knowingly if he is aware that it is practically certain that his conduct will cause a specific result. See *id.*

90. A person acts recklessly if he is aware of a substantial risk that a certain result will occur as a result of his actions. See *id.* § 2.02(2)(c). The risk must be substantial enough that the action represents a gross deviation from what a reasonable law-abiding person would do. *Id.*

91. A person acts negligently if he should have been aware of a substantial and unjustifiable risk that a certain consequence would result from his actions. See *id.* § 2.02(2)(d).

reckless or negligent action resulting in death generally referred to as negligent homicide or involuntary manslaughter. The Model Penal Code⁹² takes a slightly different approach, classifying as murder any killing committed purposefully or knowingly,⁹³ classifying as manslaughter any killing resulting from recklessness,⁹⁴ and classifying as negligent homicide any killing resulting from negligence.⁹⁵ Because it would be quite difficult to show that an entity acted purposefully,⁹⁶ this article focuses on the latter three levels of intent—knowledge, recklessness, and negligence.

A murder conviction based on a mens rea of knowledge would require that the defendant (individual or entity) take an action while aware that said action would result in the death of a human being.⁹⁷ A manslaughter, or negligent homicide, conviction would only require that the entity know that the action created a substantial risk of the death of a human being.⁹⁸ It seems quite plausible that an entity could have

92. The Model Penal Code is not itself a governing law. It is instead a model text authored by a group of judges, lawyers, and legal scholars at the American Law Institute (ALI) meant to assist with the organization and standardization of criminal law in the various states. Many states have adopted parts of the Model Penal Code. See ALI, *Model Penal Code*, <https://www.ali.org/publications/show/model-penal-code/> (last visited Jan. 8, 2018).

93. See MODEL PENAL CODE § 210.2(1)(a). This Section of the Model Penal Code also includes homicide committed “recklessly under circumstances manifesting extreme indifference to the value of human life.” *Id.* § 210.2(1)(b).

94. *Id.* § 210.3.

95. *Id.* § 210.4.

96. To prove imputed knowledge, one can rely on objective evidence of the records and information retained by the entity and by its employees. See Mihailis E. Diamantis, *Corporate Criminal Minds*, 91 NOTRE DAME L. REV. 2049, 2070 (2016) (“Since all knowledge is true, different things known by different employees can never conflict. The process of aggregating their knowledge to attribute to the corporation is easy—just take the conjunction of all the things known by employees and say the corporation knows it all.”). However, to prove imputed purpose, one would almost certainly have to rely on testimonial evidence concerning employees’ motivations to demonstrate that the entity itself *desired* a particular result, which is a more dubious proposition for a jury to embrace. See *id.* (“Consider crimes where mens rea turns on the beliefs (rather than the knowledge) of the defendant. Beliefs, of course, can be false, as in the classic hombook case of the would-be murderer who shoots a corpse.”).

97. See MODEL PENAL CODE § 2.02(2)(b)(ii) (“[I]f the element involves a result of his conduct, he is aware that it is practically certain that his conduct will cause such a result.”).

98. See *id.* § 2.02(2)(c). According to this Section of the Model Penal Code:

A person acts recklessly with respect to a material element of an offense when he consciously disregards a substantial and unjustifiable risk that the material element exists or will result from his conduct. The risk must be of such a nature and degree that, considering the nature and purpose of the actor’s conduct and the circumstances known to him, its disregard involves a gross deviation from the standard of conduct that a law-abiding person would observe in the actor’s situation.

Id.; see also *id.* § 2.02(2)(d). Section 2.02(2)(d) of the Model Penal Code states:

constructive knowledge of deaths resulting from its actions, or at least of the substantial risk of their occurrence. Indeed, that was precisely the theory motivating the prosecutor's decision to charge Ford Motor Company in the Pinto case.⁹⁹ That case stemmed from an August 10, 1978 rear-end collision with a Ford Pinto that burst into flames (allegedly due to the placement of the gas tank), resulting in the deaths of the three young women occupants.¹⁰⁰ Ford was accused in the media, and in court, of having been aware that the placement of the gas tank would result in death by fire in rear-end collision incidents.¹⁰¹ The indictment thus included a count alleging that Ford "did through the acts and omissions of its agents and employees . . . recklessly cause the death of [three women]."¹⁰² The prosecutor, and the grand jury, clearly believed that Ford, a corporation, could possess the requisite mens rea to commit manslaughter based on the risk information available to its engineers when the Pinto was designed.¹⁰³

Though few prosecutors have been so brazen as to bring general murder or manslaughter charges, there exists significant precedent for finding corporations capable of possessing the requisite level of mens rea for criminal culpability under more specific criminal prohibitions, such as environmental laws. For example, in *United States v. Dotterweich*,¹⁰⁴ the Supreme Court, in finding that the Federal Food, Drug, and Cosmetic Act imposed strict criminal liability on corporate officers based on their *opportunity* to inform themselves, acknowledged that the "person" ultimately responsible for the crime could also be the corporation itself.¹⁰⁵ Department of Justice policy has comported with the Supreme Court's view that the corporation itself, in addition to its executives, can be held criminally responsible for malfeasance.¹⁰⁶

A person acts negligently with respect to a material element of an offense when he should be aware of a substantial and unjustifiable risk that the material element exists or will result from his conduct. The risk must be of such a nature and degree that the actor's failure to perceive it, considering the nature and purpose of his conduct and the circumstances known to him, involves a gross deviation from the standard of care that a reasonable person would observe in the actor's situation.

Id. § 2.02(2)(d).

99. See Epstein, *supra* note 16, at 15; *supra* notes 15–18 and accompanying text.

100. Epstein, *supra* note 16, at 15.

101. *Id.*

102. *Id.*

103. See *id.*

104. *United States v. Dotterweich*, 320 U.S. 277 (1943).

105. *Id.* at 284–85.

106. See, e.g., Larry D. Thompson, U.S. Deputy Attorney Gen., Memorandum to Heads of Department Components and United States Attorneys on Principles of Federal Prosecution of Business Organizations 1 (2003), https://www.americanbar.org/content/dam/aba/migrated/poladv/priorities/privilegewaiver/2003jan20_privwaiv_dojthomp.authc

Indeed, one of the most widely publicized corporate prosecutions in recent years came in the environmental context. In 2016, the Department of Justice charged automaker Volkswagen with a number of crimes related to alleged deception about the emissions performance of its diesel vehicles.¹⁰⁷ The Third Superseding Information made out a violation of the federal conspiracy statute¹⁰⁸ on a number of grounds.¹⁰⁹ According to the Information:

Volkswagen . . . willfully, knowingly, and deliberately combine[d], conspire[d], and confederate[d] and did agree to:

...

c. violate the Clean Air Act, by making and causing to be made, false material statements, representations, and certifications in, and omitting and causing to be omitted material information from, notices, applications, records, reports, plans, and other documents required pursuant to the Clean Air Act to be filed or maintained, in violation of 42 U.S.C. § 7413(c)(2)(A).¹¹⁰

This charge is consistent with the Department of Justice's view that corporations can act knowingly and intentionally. Indeed, Volkswagen ultimately pleaded guilty to similar charges as part of deal with prosecutors.¹¹¹ This case presents the most recent prominent example of the law and society's willingness to find entities capable of mens rea and hold them criminally accountable for environmental crimes.

The legal history of corporate mens rea lends supports to the conclusion that, at its logical core, the law of intent treats government entities similarly. In the Reconstruction Era, when civil rights statutes came into being, municipalities (i.e., government corporations) were, as a matter of law, incapable of forming malicious intent and therefore effectively enjoyed immunity from prosecution.¹¹² However, business corporations were also regarded as incapable of forming malicious intent—the law acknowledged no distinction.¹¹³ In other words, it was not the public nature of the entity that allegedly made a municipality

heckdam.pdf ("In all cases involving wrongdoing by corporate agents, prosecutors should consider the corporation, as well as the responsible individuals, as potential criminal targets.").

107. See generally Third Superseding Information, *United States v. Volkswagen*, No. 2:16-cr-20394 (E.D. Mich. Jan. 11, 2017).

108. See 18 U.S.C. § 371 (2012).

109. See Third Superseding Information, *supra* note 107, at 6–9.

110. *Id.* at 6–7.

111. See Judgment at 1, *United States v. Volkswagen*, No. 2:16-cr-20394 (E.D. Mich. Apr. 21, 2017).

112. Green, *supra* note 20, at 1222–24.

113. *Id.* at 1224.

incapable of forming the requisite mens rea, but rather simply the fact that corporations (at that time) were not “people” in the eyes of the law. Things have changed, and the law has evolved, recognizing that corporations can manifest intent through the conduct of their agents and employees.¹¹⁴ Thus, as a matter of law, a government corporation now is considered capable of forming criminal intent.¹¹⁵ The failure to prosecute government entities cannot fairly be attributed to a rule of law concerning the formation of intent. Indeed, “[o]utside the criminal law, intentions, motives, and other mental states are regularly attributed to government entities.”¹¹⁶ It must be attributed to some other prudential concerns that distinguish a private corporation from a governmental one.¹¹⁷

One such prudential concern is what one might call “reverse imputed liability.” In other words, if a government entity, particularly in a democratic society, were found to have malicious intent, would the citizens whom that entity represents technically harbor that intent as well? As a matter of law, there is no question that imputed intent fails to operate that way.¹¹⁸ This concern is thus a political one about the

114. See *N.Y. Cent. & Hudson River R.R. Co. v. United States*, 212 U.S. 481, 494–95 (1909). According to the Court:

[T]here is a large class of offenses . . . wherein the crime consists in purposely doing the things prohibited by statute. In that class of crimes we see no good reason why corporations may not be held responsible for and charged with the knowledge and purposes of their agents, acting within the authority conferred upon them. If it were not so, many offenses might go unpunished and acts be committed in violation of law, where, as in the present case, the statute requires all persons, corporate or private, to refrain from certain practices forbidden in the interest of public policy.

Id. (citations omitted).

115. See *Green*, *supra* note 20, at 1202 (“[T]he definition of what was ‘criminal’ for municipalities was derived (like much of local government law) from the more general law of corporations.”); see also 16 U.S.C. § 1532(13) (2012) (defining “person” to include municipalities, government corporations, or political subdivisions, instrumentalities, and agencies of a state); 33 U.S.C. §§ 1362(5), 1402(e) (2012) (same); 42 U.S.C. §§ 300f(12), 6903(15), 7602(e), 9601(21), 11049(7) (2012) (same). Some statutes also define “person” to include interstate bodies, federal agencies, and the federal government itself. See, e.g., 42 U.S.C. § 300f(12) (federal agencies); *id.* § 6903(15) (interstate bodies); *id.* § 7602(e) (departments or instrumentalities of the United States); *id.* § 9601(21) (United States government); *id.* § 11049(7) (interstate bodies).

116. *Green*, *supra* note 20, at 1225.

117. See *id.* at 1203 (citing *State v. City of Portland*, 74 Me. 268, 273 (1883) (“Cases involving the criminal liability of business corporations were regularly cited as support in decisions and scholarly treatises involving the criminal liability of local governments and vice versa.”)).

118. Imputation involves attributing the acts or knowledge of an agent to a principal; in corporate criminal law, the corporation is the principal and its employees are the agents. See Michael E. Tigar, *It Does the Crime But Not the Time: Corporate Criminal Liability in Federal Law*, 17 AM. J. CRIM. L. 211, 221 (1990) (explaining how actions,

implications of conviction. For instance, would citizens of a municipality convicted of a crime of malice unjustly suffer some collateral consequences (i.e., punishment), perhaps in the form of shaming or economic hardship at the hands of citizens of other communities? Real debate could be had about the answer to that question.¹¹⁹ However, it is a question that should weigh in the mind of a prosecutor making a charging decision,¹²⁰ not a threshold question as to whether criminal prosecution is legally available as a tool to remedy a wrong committed at the hands of the government.

Another distinguishing feature of government entities that raises questions about their ability to possess criminal intent is that they are ostensibly organized for, and make decisions on the basis of, the public good.¹²¹ Private corporations primarily serve the interests of investors, or a small subset of the population. The mission of government entities to benefit all of their constituents, one might argue, imputes all policy decisions with a utilitarian intent—the greatest good for the greatest number. In other words, some citizens will suffer as a result of policy decisions, but it is expected, indeed it is crucial, that those losses occur so that more citizens can gain. To criminalize the loss-generating side of the conduct that comprises such utilitarian tradeoffs would undermine the mission of serving the public—or so the argument goes. But, the criminal law already at least partially accounts for such situations through the availability of affirmative defenses—namely, the defense of necessity.¹²² Necessity provides a defense when one's otherwise criminal act actually provides the only feasible means of preventing a greater

knowledge, and intent are imputed from employees to the “legal fiction” of a corporation).

119. See, e.g., *Albanese v. City Fed. Sav. & Loan Assoc.*, 710 F. Supp. 563, 567 (D.N.J. 1989) (declining to attribute criminal intent to a municipal corporation “because the retribution for such a wrong should not ‘be visited upon the shoulders of blameless or unknowing taxpayers’” (quoting *City of Newport v. Fact Concerts, Inc.*, 453 U.S. 247, 267 (1981))).

120. See *infra* Section V.A.

121. See Faure et al., *supra* note 83, at 534 (“An official acts for the public interest and the community profits from his actions; a private individual acts for his own interest and solely derives the benefits of his actions.”).

122. See generally Fern L. Kletter, Annotation, *Application of Defense of Necessity to Murder*, 23 A.L.R. 7th Art. 1 (2017). This annotation indicates:

Under the force of extreme circumstances, conduct which would otherwise constitute a crime is justifiable and not criminal; the actor engages in the conduct out of necessity to prevent a greater harm from occurring. The necessity defense addresses the dilemma created when physical forces beyond an actor's control render his or her illegal conduct the lesser of two evils and excuses criminal actions taken in response to exigent circumstances. It is based on the premise that illegal action should not be punished if it was undertaken to prevent a greater harm.

Id. § 2 (citation omitted).

harm—a description that could encompass regulatory risk-benefit tradeoffs. Admittedly, the defense of necessity has been interpreted and applied narrowly.¹²³ So, if one is troubled by the potential for governmental criminal liability for risk-benefit tradeoffs that significantly benefit society, a more relaxed application of the defense of necessity presents an adequate and logically consistent solution—much more elegant than simply excluding the government from the application of criminal law. Moreover, the historical record concerning the exercise of prosecutorial discretion suggests that any concern about the prosecution for truly beneficial policy decisions is likely more imagined than real.¹²⁴

B. Whether Responsibility Falls on an Entity or an Individual and the Implications for Tort Law

Despite the established law on corporate mens rea, studies have found that only about 30 percent of indictments for federal environmental crimes in a representative sample were against corporations, and of those corporations convicted of crimes, 70 percent were accompanied by a conviction of at least one individual defendant.¹²⁵ Furthermore, in the context of governmental liability, though it had been theoretically possible to prosecute some municipalities that did not enjoy the protection of sovereign immunity,¹²⁶ “state-initiated criminal prosecution of local governments was never a preferred remedy.”¹²⁷

One reason for the relative infrequency of entity prosecutions, as opposed to individual prosecutions, may stem from concerns about the intersection of tort and criminal liability. Because corporate criminal convictions result in the transfer of money, it is harder to distinguish them from civil judgments than in the individual context where prison time often distinguishes criminal from civil penalties.¹²⁸ As intimated at the outset of this work,¹²⁹ criminalizing conduct that essentially amounts

123. See generally Michael H. Hoffheimer, *Codifying Necessity: Legislative Resistance to Enacting Choice-of-Evils Defenses to Criminal Liability*, 82 TUL. L. REV. 191 (2007).

124. See *infra* notes 222–25 and accompanying text.

125. Mark A. Cohen, *Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes*, 82 J. CRIM. L. & CRIMINOLOGY 1054, 1074–75 tbl.2 (1992).

126. See *supra* Section II.B.

127. Green, *supra* note 20, at 1212.

128. See Cohen, *supra* note 125, at 1063 (“To many economists, there is no analytical difference between the criminal and the civil remedy.”); Green, *supra* note 20, at 1205 (“The lines between ‘criminal’ and ‘civil,’ however, were not always entirely clear.”).

129. See *supra* Part I.

to a failure to act to prevent the loss of life (i.e., a risk-based policy decision) threatens to upend a well-established tort regime that sits better equipped to account for risk-benefit tradeoffs.¹³⁰ Perhaps even more troubling, the criminalization of environmental policy decisions has the potential to "trivialize the criminal law itself."¹³¹ If prosecutions for the crimes described herein are to effectively materialize, the distinction between tort law and criminal law must persist.

"Generally, laws defining crimes require intent, are publicly enforced, and do not require that a victim be harmed, while laws defining torts do not require intent, are privately enforced, and require the plaintiff to establish damages."¹³² When the lines of intent are blurred (e.g., criminal negligence), the first distinguishing feature falls away, but the others remain. Furthermore, some legal scholars point not to these practical elemental differences, but rather argue that the only meaningful distinction between criminal and tortious behavior is "moral culpability," with tort law policing non-moral behavior and criminal law attaching moral responsibility to actions.¹³³ From this perspective, attaching criminal culpability to environmental policy decisions simply imbues those decisions with the appropriate amount of moral weight.

Another perspective, espoused by renowned law and economics scholar Richard Posner, posits that the primary function of criminal law in a capitalist society is to maintain the integrity of the free market by punishing those actors that attempt to bypass it.¹³⁴ Posner suggests that tort law fails to deter market bypassing actions, because the amount of damages necessary for full deterrence would exceed tort defendants' ability to pay; hence, the public sanctions and non-monetary punishments of criminal enforcement must balance the deterrence deficit.¹³⁵ The limited precedent for prosecution of municipalities provides support for Posner's thesis. According to those who study prosecutions of municipalities, prosecutions were not generally intended to compensate

130. See Cohen, *supra* note 125, at 1104 (arguing that "focusing attention on 'corporate crime' is likely to lead to misplaced priorities in environmental protection").

131. *Id.*

132. *Id.* at 1058.

133. Jules L. Coleman, *Crime, Kickers, and Transaction Structures*, in CRIMINAL JUSTICE: NOMOS XXVII 313, 326 (J. Roland Pennock & John W. Chapman eds., 1985); see also John C. Coffee, Jr., *Paradigms Lost: The Blurring of the Criminal and Civil Law Models—And What Can be Done about It*, 101 YALE L.J. 1875, 1876 (1992) (arguing "that the criminal law should be reserved to prohibiting conduct that society believes lacks any social utility, while civil penalties should be used to deter (or 'price') many forms of misbehavior (for example, negligence) where the regulated activity has positive social utility but is imposing externalities on others").

134. Richard A. Posner, *An Economic Theory of the Criminal Law*, 85 COLUM. L. REV. 1193, 1195 (1985).

135. *Id.*

victims, but rather were intended to “punish” bad actors, “correct public wrongs,” and “prevent their repetition” (i.e., deter future crimes).¹³⁶

Using criminal law to police egregious environmental policy decisions that result in death would serve a similar deterrence purpose. Moreover, it would provide some practical advantages both to victims and defendants. Victims’ families would not bear the burden of coordinating, and potentially financing, the pursuit of justice; government prosecutors would handle the case. What little record of criminal prosecutions of municipalities we have suggests that some state courts indeed viewed state-initiated criminal prosecution as more efficient than privately funded tort suits.¹³⁷ Defendants, on the other hand, would be afforded all of the constitutional protections of United States criminal procedure—protections that do not generally extend to civil defendants.¹³⁸

Even if one accepts that the criminal law can and should police deadly government decision-making, one might still take the position that the responsible party in such circumstances would be an individual official public employee rather than an entire government organization. In other words, why not look for an individual person whose state of mind can be more readily deduced, evidenced, and tested against the penal code? On this question, again, we can look to the experience with corporate crime and to some unique features of government work.

From a purely economic perspective, there exists no meaningful distinction between corporate and individual officer penalties if the officer can bear the full cost of the optimal money damages.¹³⁹ However, as Posner astutely observed, corporations themselves at times lack the resources to pay judgments at levels that would achieve optimal deterrence.¹⁴⁰ Passing the burden on to employees only extrapolates this problem. For government officials, whose salaries are fractions of their private sector counterparts, the ability to pay criminal fines individually would pale in comparison to the entities’ ability to pay.

Furthermore, to achieve efficient deterrence, punishment should be felt at the level of actor with the ability to forego future bad decisions. That is one reason why the doctrine of respondeat superior requires employers to pay tort judgments against employees for actions committed in furtherance of their employment; the corporation is the

136. Green, *supra* note 20, at 1207.

137. *Id.* at 1202.

138. *Id.* at 1243.

139. Cohen, *supra* note 125, at 1064.

140. See Posner, *supra* note 134, at 1228 (remarking that in his view, “[t]he entire rationale of the criminal law is that the optimal tort remedy is sometimes too large to be collectible” and that “corporations are not infinitely solvent”).

actor that can prevent bad decisions by its employees. Vicarious liability implicitly acknowledges that it is most efficient to punish the corporation directly, which the criminal law permits.¹⁴¹ With respect to government agencies, the relationship between the entity and the people who run it is even more entwined than employer-employee. Agencies often have complicated guidelines and policies dictating how individual officials should make decisions, and thus the best place to exert an effective degree of control over future decision-making is at the entity level.¹⁴² A conviction of a government entity would thus deter future bad decision-making by incentivizing changes to internal policies, but it would not deter qualified individuals from attempting to benefit society by entering government and making decisions.¹⁴³

From the perspective of an ambitious, rational prosecutor, the entity can present an easier target than any singular individual within it. It often proves difficult for a prosecutor, and hence a judge or jury, to determine how responsibility should be allocated between an entity and an individual member thereof.¹⁴⁴ Thus, it can be simpler and more cost effective to charge the entity alone.¹⁴⁵ Moreover, some researchers have observed that juries are generally more likely to convict a corporate defendant than an individual defendant who served as an employee of that corporation.¹⁴⁶ The same effect would likely carry over to the governmental context.

Despite these advantages, one apparent significant disadvantage looms—entities cannot be imprisoned, while individuals can. Indeed, “this was one of the principal reasons [19th] century courts and commentators cited for the proposition that corporations could not commit a felony.”¹⁴⁷ This logic applied to government entities as well. However, generally speaking, environmental and anti-trust laws allow courts to choose between a fine and imprisonment, making the unavailability of the latter irrelevant to the question of whether or not an entity could commit a crime.¹⁴⁸ As discussed above, the law has evolved to acknowledge that entities can be convicted of a wide range of criminal

141. See *supra* notes 35–39 and accompanying text.

142. See Faure et al., *supra* note 83, at 565.

143. Green, *supra* note 20, at 1245.

144. Susan L. Smith, *Shields for the King's Men: Official Immunity and Other Obstacles to Effective Prosecution of Federal Officials for Environmental Crimes*, 16 COLUM. J. ENVTL. L. 1, 16 (1991).

145. Stephen A. Saltzburg, *The Control of Criminal Conduct in Organizations*, 71 B.U. L. REV. 421, 425–28 (1991) (noting that the benefits of prosecuting an organization alone include reducing the costs of investigating and convicting, increasing the likelihood of conviction, and avoiding procedural problems).

146. Green, *supra* note 20, at 1244.

147. *Id.* at 1221.

148. *Id.*

offenses, from misdemeanors to felonies.¹⁴⁹ The question of whether exclusively monetary punishment can adequately punish and deter nonetheless persists.

Fortunately, the law is evolving in this area as well, expanding the range of punishments available to levy against entities. Most prevalent among such penalties is "corporate probation,"¹⁵⁰ with between 20 and 30 percent of convicted corporations placed on probation.¹⁵¹ This increasingly available sanction utilizes a court order to compel restorative actions on the part of the entity defendant, such as community service or a public apology.¹⁵² Consistent with one of the underlying hypotheses of this work—namely, that criminal sanctions carry some popular moral stigma not associated with civil penalties—two recent cases resulted in sentences requiring the defendant corporations to publicly apologize for their crimes in local newspapers, and one judge required a chief executive officer to personally appear in court to enter a guilty plea on behalf of his company.¹⁵³ Nonetheless, the vast majority of precedent in the context of death by environmental pollution includes charges against individuals, sometimes in lieu of charging the corporate entity.

C. *History of Charges for Environmental Crimes Resulting in Death*

Despite the relative advantages of entity prosecution just described, prosecutions for environmental degradation resulting in death have focused on individuals as well as corporations. They have tended to rely on violations of specific environmental statutes, rather than general criminal prohibitions. The general criminal prosecutions that did occur came in the wake of anomalous environmental and public health disasters, most notably two famous oil spills. Nonetheless, these prosecutions can provide important lessons for the future prosecution of

149. See *supra* notes 35–39 and accompanying text.

150. "Corporate probation" refers to court-ordered actions (or prohibitions) that apply to a convicted corporate defendant for a future period of time. See Marjorie H. Levin, *Corporate Probation Conditions: Judicial Creativity or Abuse of Discretion?*, 52 *FORDHAM L. REV.* 637, 638 (1984). Levin explains:

In response to the perceived inadequacy of fines to control corporate criminal behavior, some courts have used the Probation Act (Act) to fashion sentencing alternatives for corporate defendants. For example, courts have imposed probation conditions requiring bakeries convicted of price fixing to deliver bread to the poor and polluters to develop environmental clean-up programs.

Id. (citations omitted).

151. Cohen, *supra* note 125, at 1082.

152. *Id.* at 1083.

153. *Id.*

corporate and government entities for environmental policy decisions that ultimately kill people.

In 2010, the Deepwater Horizon drilling rig in the Gulf of Mexico perpetuated one of the most infamous and disastrous oil spills in history.¹⁵⁴ As a result of a blowout in the oil well and subsequent explosion, the rig dumped an estimated four million barrels of oil into the water and 11 workers lost their lives.¹⁵⁵ The United States Department of Justice charged two well site leaders, and the company that operated the rig, British Petroleum (BP), with, *inter alia*, 11 counts of felony manslaughter.¹⁵⁶ The charges against the individuals were ultimately dropped;¹⁵⁷ however, the corporate defendant, BP, pleaded guilty to felony manslaughter, paid four billion dollars in criminal fines and sanctions, and was put on probation for a period of five years.¹⁵⁸

In 1989, the *Exxon Valdez* struck a reef off the coast of Alaska and caused another of the most famous oil spills in history.¹⁵⁹ The disaster prompted much litigation—both civil and criminal.¹⁶⁰ In a federal criminal case, Exxon was charged with two felony and three misdemeanor counts.¹⁶¹ Exxon pleaded guilty to one misdemeanor and paid one billion dollars in fines and restitution.¹⁶² In a state criminal case, on appeal, the Alaska Supreme Court determined that a state of mind equivalent to simple negligence could be the basis for criminal

154. See generally Lily Rothman, *What Caused the Worst Oil Spill in American History*, TIME, Apr. 20, 2015.

155. Talia Buford, *In Flint Water Crisis, Could Involuntary Manslaughter Charges Actually Lead to Prison Time?*, PROPUBLICA (June 19, 2017, 12:54 PM), <https://www.propublica.org/article/flint-water-crisis-involuntary-manslaughter-charges-lead-to-prison-time>.

156. *Id.*

157. *Id.* (“[T]he Justice Department said ‘circumstances surrounding the case have changed’ and it could no longer meet the legal threshold for involuntary manslaughter charges.”).

158. Denis Binder, *The Increasing Application of Criminal Law in Disasters and Tragedies: A Global Phenomenon*, 38 W. NEW ENG. L. REV. 313, 322 (2016).

159. See Cruciotti & Matthews, *supra* note 12, at 150–54 (describing the events leading up to the spill); *id.* at 167–70 (describing the consequences and reaction to the spill).

160. See *id.* at 168. Cruciotti & Matthews explain:

After the spill, attention centered on the legal struggle that ensued between the state of Alaska, the U.S. government, Exxon, the Exxon Shipping Company, the Alyeska Pipeline Service Company and Captain Joseph Hazelwood. . . . In addition to the cases brought by the state of Alaska and the federal government, a large number of claims by commercial fisherman, cannery workers, and some smaller local governments were settled out of court.

Id.; see, e.g., *In re Exxon Valdez*, 767 F. Supp. 1509 (D. Alaska 1991).

161. Binder, *supra* note 158, at 320–21.

162. *Id.* at 321.

liability.¹⁶³ The public outrage and media coverage surrounding the spill was significant.¹⁶⁴ The question of criminal charges focused on Exxon's moral culpability for the spill.¹⁶⁵ Indeed, the prosecutor remarked that Exxon's guilty plea "reflected the moral sensibilities of the community."¹⁶⁶

Again, it bears repeating that these were anomalous cases, and a rich history does not yet exist for holding entities, particularly government agencies, culpable under general criminal prohibitions against killing of human beings. That is not for want of possible prosecutorial targets or precedent from other countries. This is especially true if one accepts the argument advanced herein that government entities also have potential criminal culpability.¹⁶⁷ As just one prominent and straight-forward example, the United States has essentially admitted to conducting a medical study in Guatemala in the late 1940s wherein researchers intentionally infected hundreds of people with gonorrhea and syphilis (potentially fatal diseases) without their knowledge or consent.¹⁶⁸ Though no domestic prosecutions in either the United States or Guatemala have yet resulted, in 2015, the Archdiocese of Guatemala's Human Rights Office petitioned the Inter-American Commission on Human Rights to rule that the experiments violated the customary international law on human rights, the American Declaration on the Rights and Duties of Man, and the American Convention on Human Rights.¹⁶⁹ This potential international law relief, to the extent available,

163. See *State v. Hazelwood*, 946 P.2d 875, 884 (Alaska 1997) (remarking that "the negligence standard is constitutionally permissible because it approximates what the due process guarantee aims at: an assurance that criminal penalties will be imposed only when the conduct at issue is something society can reasonably expect to deter").

164. See, e.g., John Holusha, *Exxon's Public-Relations Problem*, N.Y. TIMES (Apr. 21, 1989), www.nytimes.com/1989/04/21/business/exxon-s-public-relations-problem.html?pagewanted=all; see also Thomas A. Birkland & Regina G. Lawrence, *The Social and Political Meaning of the Exxon Valdez Oil Spill*, 7 SPILL SCI. & TECH. BULL. 17, 17 (2002) (describing "[p]ublic reaction [that] ranged from sorrow to outrage"). The *New York Times* archive of stories relating to the Exxon Valdez spill can be found at *Exxon Valdez Oil Spill (1989)*, N.Y. TIMES, <https://www.nytimes.com/topic/subject/exxon-valdez-oil-spill-1989> (last visited Dec. 13, 2017).

165. Cohen, *supra* note 125, at 1059.

166. *Id.* (quoting L. Gordon Crovitz, *Justice for the Birds: Exxon Forgot to Get a Hunting License*, WALL ST. J., Mar. 20, 1991, at A23).

167. See *supra* Section II.A.

168. Hillary Rodham Clinton, Sec'y of State, & Kathleen Sebelius, Sec'y Dep't of Health & Human Servs., Joint Statement on a 1946–1948 Study (Oct. 1, 2010) (transcript available at <https://2009-2017.state.gov/secretary/20092013clinton/rm/2010/10/148464.htm>).

169. See Petition in the Inter-American Commission of Human Rights Organization of American States Washington, D.C. USA at 3–4, *Oficina De Derechos Humanos Del Arzobispado De Guatemala v. Guatemala* (2015), <https://www.law.uci.edu/academics/real-life-learning/clinics/IHRC-GuatemalaPetition.pdf>.

presents the closest existing analog to criminal prosecution of a federal government entity.

Cases that have involved charges of homicide or manslaughter, rather than charges of violating environmental laws, have come primarily in the wake of disasters, and guilty verdicts in such cases have almost exclusively come outside the United States.¹⁷⁰ For example, after Hurricane Katrina, prosecutors charged the owners of a nursing home outside New Orleans with negligent homicide and cruelty to the elderly or infirm based on the facility's decision not to evacuate before the storm.¹⁷¹ They were ultimately acquitted, in part because jurors felt that the state, rather than the owners of the home, was ultimately responsible for the residents' safety.¹⁷² The jurors believed that the mistakes made in preparing for the storm were widespread, and did not feel comfortable holding just the tiny subset of private actors who were before the court as defendants criminally responsible.¹⁷³ Similarly, after Cyclone Xynthia struck France in 2010, officials (including the mayor) and the owner of a building company in two coastal towns faced charges of manslaughter based on the permitting and construction of homes within a dangerous flood zone.¹⁷⁴ In that case, the jury returned guilty verdicts, resulting in jail time for the defendants.¹⁷⁵ And the case most closely analogous to the theory of prosecution posited herein came after a 2009 earthquake in Italy killed 309 people and injured over 1,100 more.¹⁷⁶ Italian prosecutors charged a number of scientists and a government official with manslaughter based on their inadequate assessment of earthquake risk.¹⁷⁷ The jury returned a guilty verdict in that case in 2013.¹⁷⁸

170. Jessica Anne Wentz, *Government Officials' Liability After Extreme Weather Events: Recent Developments in Domestic and International Case Law*, COLUM. L. SCH.: CLIMATE L. BLOG (Feb. 18, 2015), <http://blogs.law.columbia.edu/climatechange/2015/02/18/government-officials-liability-after-extreme-weather-events-recent-developments-in-domestic-and-international-case-law/> ("Public officials and private actors have thus been put on notice that, at least in certain jurisdictions and under certain circumstances, they could incur civil and even criminal liability for negligent or reckless conduct that contributes to death or damage during an extreme weather event.").

171. *Katrina Nursing Home Owners Acquitted*, NBC NEWS, http://www.nbcnews.com/id/20649744/ns/us_news-crime_and_courts/t/katrinanursing-home-owners-acquitted/#.Vh4qdrRViko (last updated Sept. 7, 2007, 10:26 PM).

172. *Id.* (quoting two jurors as saying, "There were a lot of mistakes made, and it should have been a lot of people answering for it. So why just these two people?" and "The state was responsible for the safety of nursing home residents. They didn't do what they should have.").

173. *See id.*

174. Binder, *supra* note 158, at 347–48.

175. *See id.* at 348.

176. *Id.*

177. *Id.* at 348–49.

178. *See id.* at 349.

D. Flint, Michigan as a Test Case

As this article goes to press, perhaps the most prominent example of charging government officials with manslaughter on the basis of environmental policy decisions makes headlines.¹⁷⁹ The case stems from the so-called “water crisis” in Flint, Michigan.¹⁸⁰ In an attempt to save money, the city shifted its drinking water source from Lake Huron (Detroit’s supplier) to the Flint River.¹⁸¹ Flint officials declined to utilize a corrosion control agent to protect the city’s pipes from leeching into the water supply.¹⁸² Lead from the pipes ultimately contaminated the water; despite officials’ assertions that the water was safe to drink, this contamination has resulted in 87 cases of Legionnaires’ disease, including nine deaths, since the spring of 2014.¹⁸³

Assigning legal responsibility for the crisis has been the focus of the Michigan Attorney General, who had plenty of help from the media, the public, and expert analysts. The investigative record indicates that a number of government entities could have been found culpable—from the Michigan Department of Environmental Quality to the Flint Water Department to the U.S. Environmental Protection Agency (EPA).¹⁸⁴ Ultimately, the Attorney General charged the Director of the Michigan Department of Health and Human Services, the Flint Emergency Manager, the Flint Water Department Manager, the Drinking Water

179. See, e.g., *Another Michigan official to face manslaughter charge in Flint water crisis*, CHICAGO TRIBUNE (Oct. 9, 2017), <http://www.chicagotribune.com/news/nationworld/midwest/ct-flint-water-crisis-charges-20171009-story.html>; Scott Atkinson & Monica Davey, *Manslaughter Is Charge for 5 in Flint Crisis*, N.Y. TIMES, June 15, 2017, at A1.

180. See *Flint Water Crisis*, N.Y. TIMES, <https://www.nytimes.com/news-event/flint-water-crisis> (last visited Dec. 6, 2017).

181. Buford, *supra* note 155; see also TODD FLOOD ET AL., INTERIM REPORT OF THE FLINT WATER CRISIS INVESTIGATION 5–6 (2017), http://www.michigan.gov/documents/ag/Flint+Water+Interim+Report_575711_7.pdf (laying out how the designation of Flint as a “local government financial emergency” was followed by the switch in water supplies).

182. FLOOD ET AL., *supra* note 181, at 4.

183. *Id.* at 6–9.

184. See David A. Dana & Deborah Tuerkheimer, *After Flint: Environmental Justice as Equal Protection*, 111 NW. U. L. REV. 93, 94 (2017). According to Dana and Tuerkheimer:

MDEQ [Michigan Department of Environmental Quality] appears to bear primary responsibility for the disaster. But across the board, governmental workers at the state Department of Health and Human Services, the Governor’s office, the county health department, and the EPA, among others, all fell short of their responsibilities to the citizens of Flint. The clear picture that emerges is one of systemic disregard for the city’s residents

Id.; see also MATHEW M. DAVIS ET AL., FLINT WATER ADVISORY TASK FORCE FINAL REPORT 1 (2016), https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf.

Chief of the Michigan Department of Environmental Quality, and the Water Supervisor with involuntary manslaughter.¹⁸⁵ Interestingly, none of the entities were charged. The charges allege that the officials failed to properly alert the public about the Legionnaires' cases, withholding crucial information that might have prompted members of the community to avoid the water had they known of the water quality issues.¹⁸⁶ The charges specifically assign responsibility for the death of one victim, though there were many.¹⁸⁷ Government emails from 2014 to 2016 provided the basis for the charges, demonstrating that certain officials were aware of the pattern of Legionnaires' cases, but that they failed to act.¹⁸⁸ In addition to these state charges, federal charges may yet be forthcoming, as the U.S. Attorney for the Eastern District of Michigan continues to investigate the events surrounding the water crisis.¹⁸⁹

As the discussion thus far has indicated, these types of manslaughter charges based on environmental policy—even against individuals within the government—are extremely rare in the United States and mostly unprecedented.¹⁹⁰ These cases test the underlying observation that motivates this article—knowing killing by policy action (or inaction) cannot be meaningfully distinguished from knowing killing by a physical instrument. If a Michigan jury finds these government individuals guilty of manslaughter (or they enter guilty pleas resulting in convictions), significant precedent will be set that lays the groundwork for government entity criminal liability on the basis of environmental decision-making. For the reasons set forth above,¹⁹¹ future prosecutors looking to try

185. Atkinson & Davey, *supra* note 179, at A1; Mich. Dep't of Att'y Gen., *Schuette Charges MDHHS Director Lyon, Four Others with Involuntary Manslaughter in Flint Water Crisis*, MICHIGAN.GOV (June 14, 2017), <http://www.michigan.gov/ag/0,4534,7-164-78314-423854--,00.html>.

186. See Mich. Dep't of Att'y Gen., *supra* note 185.

187. *Id.* A publication by the Michigan Department of Attorney General stated: All defendants charged with involuntary manslaughter are charged in relation to the death of Robert Skidmore, 85, of Mt. Morris, Michigan. Skidmore died of Legionnaires' disease after many others had been diagnosed with the illness, yet no public outbreak notice had been issued. The charges allege failure to notify and lack of action to stop the outbreak allowed the disease to continue its spread through Flint's water system.

Id. In Michigan, involuntary manslaughter carries a potential sentence of up to 15 years in prison and a \$7,500 fine. MICH. COMP. LAWS § 750.321 (2017).

188. Mich. Dep't of Att'y Gen., *supra* note 185.

189. Buford, *supra* note 155.

190. *Id.* ("As environmental crimes go, the levying of felony involuntary manslaughter charges against high-ranking state and city officials has put the Flint water crisis investigation squarely into new territory."); Matthew Dolan, *Manslaughter Charges Against Politicians Will Be Tough: Here's Why*, DETROIT FREE PRESS (June 14, 2017, 11:36 AM), <http://www.freep.com/story/news/local/michigan/2017/06/14/criminal-charges-michigan-officials/395575001/>.

191. See *supra* notes 141–53 and accompanying text.

similar cases against government officials would likely perceive the benefits of charging the entity itself rather than the individuals working for it.

Commentators and scholars have engaged in a lively debate about the likelihood of obtaining convictions in these cases.¹⁹² Some, like Professor Peter Henning, stress the difficult task facing the prosecution in proving a direct causal relationship between the government inaction and the outbreak of Legionnaires' disease.¹⁹³ Establishing direct causation is particularly difficult because, unlike most homicide cases, the defendants' decision at the heart of these cases was an act of omission, rather than commission.¹⁹⁴ Whether or not one can be criminally culpable for a failure to act would likely be a question common to many future cases against policymaking individuals or entities. Often the deadliest environmental policy decisions are decisions to do nothing to control a pollutant, preserve a natural resource, or address an environmental condition. As in almost any case involving environmental law, expert testimony will feature prominently—here, in the context of the Flint water crisis, demonstrating the connection between the lead contamination and Legionnaires' disease.¹⁹⁵ Testimony in these cases would also have to show, however, that the information known to officials clearly indicated that death would result from inaction.

According to at least one former chief of the Environmental Crimes Section of the United States Department of Justice, it is not outside the normal bounds of the criminal law to apply manslaughter to circumstances where death results from exposure to unabated environmental contamination, provided the requisite knowledge on the part of government officials can be proved.¹⁹⁶ The Flint cases, in particular, benefit from many years of well-established scientific, economic, and health research on the effects of lead and prevention of its inclusion in drinking water. The cost-benefit analyses, showing that many lives would be saved if a few dollars had been spent, have been

192. See, e.g., *State has "a lot to prove" to win convictions for involuntary manslaughter in Flint crisis*, NAT'L PUB. RADIO (June 19, 2017) (featuring an interview with Professor Adam Candeub of Michigan State University College of Law).

193. Dolan, *supra* note 190.

194. *Id.* ("This is a case about an omission, a failure to act, not typical in a homicide case.").

195. See *id.*

196. *Id.* (quoting Steve Solow, Partner, Katten Muchin Rosenman LLP) ("Is it within the normal boundaries of criminal law to hold a state official criminally liable for acts while in office for this kind of harm? The answer is a qualified yes, depending what they knew and when they knew it and what they did with that information.").

done many times over.¹⁹⁷ Indeed, much of the public is aware of the danger lead poses, particularly to children. In other words, it should not be too difficult to demonstrate that knowledge of the existence of lead in drinking water meant knowledge that children would die.

The need to pursue criminal justice, international or otherwise, for overt actions that directly harm other human beings presents the strongest argument for government entity culpability. But what of situations, like Flint,¹⁹⁸ where it is the government entity's failure or refusal to act that results in death? Such is the state of affairs for many of the harms from environmental policy decisions. As the pending Flint case suggests, the criminal law does impose liability for omission in certain scenarios, notably where a duty exists. With respect to environmental protection, the government owes a duty of care to its citizens based upon statutes and, more fundamentally, by the nature of the fact that it controls public resources (such as air and water).¹⁹⁹ Furthermore, the law of omission recognizes that when a party acts to create a dangerous situation, a duty may arise where one may not have otherwise existed.²⁰⁰ Government decisions of the past, related to

197. See Carla Campbell et al., *A Case Study of Environmental Injustice: The Failure in Flint*, 13 INT'L J. ENVTL. RES. & PUB. HEALTH 951, 953 (2016). Campbell explains:

The costs from lead poisoning are considerable, as are the cost savings for prevention of childhood lead poisoning. Attina and Trasande state that in the United States and Europe the lead-attributable economic costs have been estimated at \$50.9 and \$55 billion dollars, respectively. . . . A previous analysis showed that each dollar invested in lead paint hazard control results in a return of \$17–\$221 or a net savings of \$181–\$269 billion for a specific cohort of children under six years of age.

Id. (citations omitted).

198. Flint is not by any means the only example of the failure of government to address ongoing harm to its citizens, even in the water quality context alone. The Washington, D.C. water crisis is an example of a looming crisis of similar concern. See Eric Moorman, *"A Greater Sense Of Urgency": EPA's Emergency Authority Under The Safe Drinking Water Act And Lessons From Flint, Michigan*, 47 ENVTL. L. REP. 10786, 10793–94 (2017).

199. See, e.g., 42 U.S.C. § 300i (2012). For example, Title 42 of the United States Code states:

[T]he Administrator [of EPA], upon receipt of information that a contaminant which is present in or is likely to enter a public water system or an underground source of drinking water, or that there is a threatened or potential terrorist attack (or other intentional act designed to disrupt the provision of safe drinking water or to impact adversely the safety of drinking water supplied to communities and individuals), which may present an imminent and substantial endangerment to the health of persons, and that appropriate State and local authorities have not acted to protect the health of such persons, may take such actions as he may deem necessary in order to protect the health of such persons.

Id.

200. See RESTATEMENT (SECOND) OF TORTS § 314 cmt. a (AM. LAW INST. 1965) (describing, as one of the situations where a duty to act to protect another exists, a situation of peril created by the actor's conduct).

environmental policy and others, have contributed to the creation of the dangerous situation we face today. Thus, the question of criminal culpability for government entities turns more on the mens rea element than on any act versus omission distinction.²⁰¹

IV. KNOWING KILLING IN ENVIRONMENTAL DECISION-MAKING

Thanks in large part to advances in technology and scientific understanding, entities responsible for making decisions about the cleanliness of our environment have the ability to obtain, and do in fact possess, knowledge that could satisfy the intent element of a crime. Some 'hypothetical examples utilizing common environmental policy decisions illustrate this point.

A. Knowledge in the Information Age

The concept of a "statistical life"²⁰² in risk and decision analysis predates even the Pinto case. It is with this case, however, that the concept came into the public consciousness. Ford engineers and executives were portrayed in the popular media as cold-hearted, and were criminally prosecuted, for having determined that the expected large expense of installing additional safety measures in the Pinto outweighed the expected loss of 180 unknown "statistical lives" due to the cheaper design.²⁰³ In other words, to Ford, the value of a statistical life (or 180 statistical lives, to be precise) was less than the cost of the additional safety measures. At the time of that decision, Ford had no way of knowing the identities of the predicted casualties, but modeling could provide a number of expected deaths.²⁰⁴ Those indeterminate people whose deaths will, according to modeling, be the result of a decision have moral, and criminal, significance. Indeed, some of the most horrific crimes in recent memory have not targeted specific individual victims,

201. There is, of course, also a question of the relative culpability of the regulators versus the regulated, especially with respect to emissions and other pollution. That is beyond the scope of this article for two reasons. First and foremost, much has been written about holding polluters accountable for their actions. Second, the theoretical questions and difficult issues present differently in the context of corporate polluters, particular when they are operating in compliance with environmental regulations. This article operates from the assumption that rational polluters will emit pollutants to the fullest extent permitted by those regulations.

202. Heinzerling, *supra* note 19, at 530 ("At the least, a statistical life is an unidentified life; we do not know who will die when a statistical life hangs in the balance.").

203. DOUGLAS BIRSCH & JOHN H. FIELDER, *THE FORD PINTO CASE: A STUDY IN APPLIED ETHICS, BUSINESS, AND TECHNOLOGY* 28 (1994); see Epstein, *supra* note 16, at 20; see also Mark Dowie, *Pinto Madness*, *MOTHER JONES*, Sept./Oct. 1977, at 18.

204. See Epstein, *supra* note 16, at 19–20.

but rather had as their aim the death of large numbers of indeterminate citizens.²⁰⁵ As Heinzerling aptly stated, “[t]here are no statistical people; there are only real people. If a person dies due to an environmental hazard, a real person dies—even if we do not know who she is, and even if many other people were also exposed to the hazard that killed her.”²⁰⁶

Thanks to advances in computing technology and environmental science, the decision tools available to environmental policymakers have become quite sophisticated.²⁰⁷ A variety of modeling software exists for a whole suite of environmental problems from water quality²⁰⁸ to power plant operations.²⁰⁹ These models can make projections with varying degrees of confidence. When the model is 95 percent confident in a range of outcomes in terms of statistical lives lost, or deaths prevented, based on the policy choice,²¹⁰ it would seem that the prediction has not only statistical, but also criminal, significance. As described earlier, an actor is said to have knowledge of a result if it is “practically certain” to occur and is said to act recklessly when there is a “substantial risk” of the result.²¹¹ Thus, when armed with the type of modeling now readily available, government entities possess the ability to act at least recklessly, if not knowingly, with regard to indeterminate human lives.

205. For example, the Boston Marathon Bombings of April 15, 2013 resulted in many injuries and deaths of people unknown to the perpetrators. *See generally* *Terror at the Marathon*, BOS. GLOBE <http://www.bostonglobe.com/metro/specials/boston-marathon-explosions> (last visited Dec. 7, 2017).

206. Heinzerling, *supra* note 19, at 531; *see also* Mark Kelman, *Saving Lives, Saving from Death, Saving from Dying: Reflections on ‘Over-Valuing’ Identifiable Victims*, 11 YALE J. HEALTH POL’Y, L., & ETHICS 51, 59–60 (2011).

207. *See generally* GONGBING PENG, LANCE M. LESLIE & YAPING SHAO, ENVIRONMENTAL MODELLING AND PREDICTION (2002); ENVIRONMENTAL MODELLING, SOFTWARE AND DECISION SUPPORT: STATE OF THE ART AND NEW PERSPECTIVES (Anthony J. Jakeman, Alexey A. Voinov, Andrea E. Rizzoli & Serena H. Chen eds., 2008); Olaf David et al., *A Software Engineering Perspective on Environmental Modeling Framework Design: The Object Modeling System*, 39 ENVTL. MODELLING & SOFTWARE 201 (2013); Anthony J. Jakeman et al., *Ten Iterative Steps in Development and Evaluation of Environmental Models*, 21 ENVTL. MODELLING & SOFTWARE 602 (2006).

208. *See, e.g.*, *Surface Water Models*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/exposure-assessment-models/surface-water-models> (last visited Dec. 14, 2017) (describing, and providing access to, a number of EPA models for contaminants in surface water).

209. *See, e.g.*, *Clean Air Markets—Power Sector Modeling*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/airmarkets/clean-air-markets-power-sector-modeling> (last visited Dec. 14, 2017) (describing, and providing access to, EPA’s Integrated Planning Model).

210. Risk analysts and epidemiologists compare the model results under the considered policies to the no-action alternative to calculate the number of “excess deaths” (or, when expressed as a rate, “excess mortality”). *See, e.g.*, Antonio Gasparini et al., *Projections of temperature-related excess mortality under climate change scenarios*, LANCET PLANETARY HEALTH, Nov. 14, 2017, at 2–3.

211. *See supra* notes 89–90 and accompanying text.

Obviously, the degree of certainty in the model's projections would affect the precise level of mens rea, but, if Ford could be criminally charged 50 years ago, science and technology surely have advanced to the point where projections can constitute a criminally relevant degree of knowledge.

As the Pinto case, and the commentary that followed, illustrated, using statistical analyses of expected premature deaths (or lives saved) as clear evidence of knowledge for the purposes of criminal law has the potential to paralyze decision-makers working with or regulating dangerous subjects (i.e., things that inevitably cause some injury and death). In such circumstances, models will show that deaths will result from any one of the range of decisions and thus, applied bluntly and harshly, the criminal law would make all of those decisions culpable. There must be some limit on the criminal law's application in these circumstances; otherwise, decision-makers will be incentivized to either remain ignorant to the human consequences of policy options and fail to invest in improved scientific modeling or, worse, simply neglect to make important decisions. One might describe this problem as one of "overdeterrence" to the point of paralysis or even negative feedback.²¹²

Clearly, the interaction of the criminal justice system with the regulatory process must be carefully constrained. The above discussion should illuminate, however, that the necessary constraints are not built in to the criminal law of intent or the concept of legal "personhood." Furthermore, because optimal policymaking requires fully informed actors, constraining the application of criminal law by halting technological advancements or government research seems highly undesirable. To avoid that undesirable outcome, a few existing mechanisms must be appropriately applied to contemplated prosecution of government entities for environmental policy decisions. Those mechanisms, discussed in other sections of this work, include the defense of necessity,²¹³ the exercise of prosecutorial discretion,²¹⁴ and statutory reform.²¹⁵ It is beyond the scope of this work to devise new mechanisms that might cabin the potential negative consequences that flow from the increased prosecution of the type of crimes described herein.

212. See Cohen, *supra* note 125, at 1062. Cohen explains this concept of overdeterrence:

The concern is that high penalties will lead to 'overdeterrence' of activities that society does not wish to prohibit entirely. We do not, for example, want to raise the 'price' of causing an oil spill so high that we deter firms from engaging in the socially beneficial practice of oil transportation.

Id.

213. See *supra* notes 122–23 and accompanying text.

214. See *infra* Section V.A.

215. See *infra* note 220 and accompanying text.

B. A CERCLA Illustration

Consider how this framework might apply to a decision about the level of cleanup at a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)²¹⁶ site (i.e., the record of decision outlining the cleanup alternative selected). Better known as “Superfund,” this statute requires responsible parties to pay for the cleanup of contaminated sites.²¹⁷ Once a site has been identified, EPA prepares a Remedial Investigation and Feasibility Study (RI/FS), which would include information about the expected exposure of people in the surrounding community. Based on the advanced modeling technology and epidemiological studies now available, the RI/FS for a given site could very likely indicate the number of additional individuals (i.e., above some baseline cancer rate) who would contract cancer as a result of different levels of exposure.²¹⁸ Combined with cancer research demonstrating survival rates for the types of cancer at issue, the exposure figures provide a basis of knowledge about the outcomes of different cleanup scenarios in terms of lives lost (or saved).

Hence, EPA’s decisions regarding whether or not to clean up the site and what level of cleanup is necessary would likely be knowing decisions about the lives of humans in the nearby community. Deciding, without a legitimate defense, to cut short the lives of citizens just to save money on the cleanup would thus become criminally culpable behavior when those citizens ultimately passed away. Deciding whether or not to bring such charges would involve further analysis of, *inter alia*, the modeling and science involved, the range of potential outcomes, and the alternatives available to EPA. Regardless of the merits of exercising prosecutorial discretion in this highly simplified hypothetical, the situation illustrates how scientific improvements, together with the *mens rea* concept of knowledge, can imbue environmental policymaking with criminal, in addition to moral, culpability.

V. IMPLICATIONS FOR PROSECUTORS AND ADMINISTRATORS

The analysis above should affect the behavior of both prosecutors deciding whether and which government entities or officials to charge with crimes and administrators deciding which policies to adopt and

216. 42 U.S.C. §§ 9601–9675 (2012).

217. *See id.* at § 9607. For a helpful overview of the CERCLA process, see U.S. ENVTL. PROT. AGENCY, THIS IS SUPERFUND: A COMMUNITY GUIDE TO EPA’S SUPERFUND PROGRAM (2011), <https://semspub.epa.gov/work/HQ/175197.pdf>.

218. Risk analysts and epidemiologists use the term “excess deaths” (or, when expressed as a rate, “excess mortality”) to describe this difference from the control, or baseline, condition.

implement. The implications for prosecutors reach beyond the intersection of criminal and environmental law; decisions about how far to push the concepts of mens rea and manslaughter could affect the continued efficacy of the entire criminal justice system, as well as the public's faith in it. Government agencies taking seriously their own potential criminal culpability can utilize that additional dimension of analysis to improve policymaking and communication.

A. Prosecutors Exercising Discretion

The criminal law of intent, as currently understood, does not constrain the reach of powerful criminal prohibitions (and associated penalties). While the risks of overdeterrence and paralysis in environmental decision-making may undoubtedly exist, any argument that the law itself fully accounts for those risks (e.g., through the separation of tort from crime) is disingenuous.²¹⁹ Absent statutory reform heightening the mens rea requirements for entity (rather than individual) criminal defendants, many decisions would theoretically create both criminal and tort culpability.²²⁰ Unaddressed and unconstrained, the problems presented by criminal culpability, manifesting through countless prosecutions, could erode public support in, and the ultimate effectiveness of, the environmental criminal law and the entire criminal justice system. Fortunately, the risks presented by criminalization of government entity non- or mal-feasance in environmental policymaking are not dissimilar from risks that the United States Department of Justice has dealt with for years in the general realm of corporate criminal liability. The chief tool for managing these risks, and thus maintaining the coexistence of effective criminal and civil systems, has thus far been the exercise of prosecutorial discretion.

The Department of Justice has for many years operated under guidelines issued by successive Deputy Attorneys General carefully dictating when, and when not, to file criminal charges against corporations.²²¹ These guidelines governed discretion not only with

219. One need only look to the existence of criminal negligence prohibitions in various contexts to see that the bright-line distinction between tort and crime has been blurred for some time—if it ever was as clear as some scholars would like to think.

220. One such potential reform might enshrine in law some of the guidance-based limitations on prosecutorial discretion. *See infra* notes 221–26 and accompanying text. For example, a statutory reform of the mens rea requirement for entities might require not only knowledge of the expected loss of human life but also intentionally keeping that knowledge from the public.

221. The famous foundational memorandum in this respect was authored by Deputy Attorney General Larry Thompson in 2003. *See generally* Thompson, *supra* note 106. Since the Thompson Memo, successors have issued similar memoranda modifying the Department of Justice policy on the issue of corporate prosecution. *See generally* Mark

respect to prosecutions of corporations, but also—importantly, for the purposes of this article—explicitly “appl[ie]d to the consideration of the prosecution of all types of business organizations, including . . . government entities.”²²² The foundational “Thompson Memo” delineated a number of specific factors to guide a prosecutor’s decision whether or not to pursue charges against a corporate entity.²²³ Of the nine factors, three could have particular relevance to the question of whether or not to prosecute a government entity for an environmental policy decision: (1) potential collateral consequences on innocent parties, including the public; (2) adequacy of the prosecution of individuals within the entity;

Filip, U.S. Deputy Attorney Gen., Memorandum to Heads of Department Components and United States Attorneys on Principles of Federal Prosecution of Business Organizations (2008), <https://www.justice.gov/sites/default/files/dag/legacy/2008/11/03/dag-memo-08282008.pdf>; Paul J. McNulty, U.S. Deputy Attorney Gen., Memorandum to Heads of Department Components and United States Attorneys on Principles of Federal Prosecution of Business Organizations (2006), https://www.justice.gov/sites/default/files/dag/legacy/2007/07/05/mcnulty_memo.pdf; Sally Q. Yates, U.S. Deputy Attorney Gen., Memorandum to Six Assistant Attorney Generals, the Director of the Federal Bureau of Investigation, the Director of the Executive Office for United States Trustees, and United States Attorneys on Individual Accountability for Corporate Wrongdoing (2015), <https://www.justice.gov/archives/dag/file/769036/download>.

222. Thompson, *supra* note 106, at 1 n.1. This footnote in the Thompson Memo, which applied the memo’s guidelines to prosecutions of government entities, also appeared in the memos authored by Filip and McNulty. See Filip, *supra* note 221, at 1 n.1; McNulty, *supra* note 221, at 1 n.1.

223. The Thompson Memo stated:

[P]rosecutors should consider the following factors in reaching a decision as to the proper treatment of a corporate target:

1. the nature and seriousness of the offense, including the risk of harm to the public, and applicable policies and priorities, if any, governing the prosecution of corporations for particular categories of crime;
2. the pervasiveness of wrongdoing within the corporation, including the complicity in, or condonation of, the wrongdoing by corporate management;
3. the corporation’s history of similar conduct, including prior criminal, civil, and regulatory enforcement actions against it;
4. the corporation’s timely and voluntary disclosure of wrongdoing and its willingness to cooperate in the investigation of its agents, including, if necessary, the waiver of corporate attorney-client and work product protection;
5. the existence and adequacy of the corporation’s compliance program;
6. the corporation’s remedial actions, including any efforts to implement an effective corporate compliance program or to improve an existing one, to replace responsible management, to discipline or terminate wrongdoers, to pay restitution, and to cooperate with the relevant government agencies;
7. collateral consequences, including disproportionate harm to shareholders, pension holders and employees not proven personally culpable and impact on the public arising from the prosecution; and
8. the adequacy of the prosecution of individuals responsible for the corporation’s malfeasance;
9. the adequacy of remedies such as civil or regulatory enforcement actions.

Thompson, *supra* note 106, at 3 (citations omitted).

and (3) adequacy of remedies such as civil or regulatory enforcement actions.²²⁴

The exercise of prosecutorial discretion guided by these memoranda has been met with mixed reactions from the scholarly community and the bar.²²⁵ Though some of the most forceful critics believed that the approach in the Thompson Memo “threaten[ed] the very foundation of our system of justice,”²²⁶ no such apocalyptic result came about. Flaws were exposed, and subsequent Department of Justice guidelines have modified the initial approach, but, overall, the prosecution of corporations has not overwhelmed the criminal justice system or rendered the civil system irrelevant or obsolete.

The Department of Justice guidelines would, of course, not apply to state court prosecutions under the laws prohibiting manslaughter and other forms of knowing killing. Nonetheless, these guidelines provide an illustrative test case and helpful model of coordinated prosecutorial discretion as a protective measure against the risks of overdeterrence and decision paralysis. Corporations still operate and generate significant profits despite limited prosecution pursuant to the Department of Justice guidelines. The federal justice system remains functional. Similarly, government agencies would continue to make policy choices and state justice systems would still operate if carefully calibrated constraints of prosecutorial discretion were applied to prosecutions of government entities.

While it is beyond the scope of this work to propose such guidelines in their entirety, some factors to consider present themselves quite readily. In addition to the Thompson Memo factors, particularly those highlighted above, prosecutors would also want to consider: the degree of deception, if any, employed by the potential government entity defendant in hiding from the public what it knew²²⁷ and the degree of harm caused by the decision at issue, especially in comparison to alternatives. Considerations like these should help maintain the balance between tort and criminal law while preventing prosecutions from deterring the government into paralysis.

224. See *id.*

225. Compare Erik Paulsen, *Imposing Limits on Prosecutorial Discretion in Corporate Prosecution Agreements*, 82 N.Y.U. L. REV. 1434, 1435 (2007) (describing the Thompson Memo as the subject of “[c]ondemnation . . . from all directions”), with Christopher A. Wray & Robert K. Hur, *Corporate Criminal Prosecution in a Post-Enron World: The Thompson Memo in Theory and Practice*, 43 AM. CRIM. L. REV. 1095, 1096 (2006) (taking the position that “the [Thompson] Memo has largely accomplished its objectives and that many of the criticisms are overwrought”).

226. Wray & Hur, *supra* note 225, at 1096.

227. For a good example of a situation meeting this criteria, see the prior description of the Flint Water Crisis, *supra* Section III.D.

B. Policymakers Choosing and Communicating

As stated at the outset, the object of this article is not simply to lay the groundwork for a manslaughter prosecution of EPA. Likewise, the article is not meant to be a hollow thought experiment. While limited prosecutions, constrained by the tools just described, are desirable, the real utility of the analysis herein should be felt by policymakers and comes in two areas.²²⁸

First, policymakers ought to carefully consider how the potential criminality of their choices factors into decisions. Clearly, society would not be better off if such consideration paralyzes federal agencies, and there are some decisions wherein every option will almost certainly result in loss of life above the baseline. However, if policymakers add a moral and criminal dimension to their analysis, perhaps they will craft more robustly reasoned policies that benefit both society and their own consciences. According to one scholarly account, this added dimension is precisely how the potential for criminal liability has affected environmental policymakers in Germany, where the threat of prosecution is theoretically real, but has not in practice been widely exercised.²²⁹ Accordingly, if coordinated prosecutorial discretion counsels against prosecution in almost all instances, the theoretical threat of prosecution still serves a valuable purpose in directing policy. Indeed, the ideal societal outcome would be that actual prosecutions not be necessary to achieve the desired level of protection of human health and the environment.

Second, to the extent that policymakers select options that prioritize saving statistical lives over other potential objectives, the framework proposed herein provides a useful tool for communicating that selection to constituents and garnering support. Kahan and his colleagues have demonstrated that people tend to acknowledge (or do not acknowledge)

228. One alternative scenario exists in which this article operates to create perverse incentives for government entities not to conduct modeling or risk analysis, at least with respect to human lives. Or perhaps the government shields such studies from public access in the future. The publication of this article indicates that, to the author's estimation, this article will more likely result in lives saved than government secrecy. Moreover, the confidence in that calculus does not rise to the level of certainty necessary to establish a *mens rea*.

229. Faure et al., *supra* note 83, at 548. Faure et al. state:

Until today, the [German] system has obtained only one final conviction of an environmental protection agency official for an environmental crime. This fact, however, does not justify the conclusion that criminal liability of government officials is irrelevant under German law. The mere possibility of prosecution deters German civil servants who work for environmental agencies from committing violations.

Id. (citation omitted).

the existence of environmental problems (specifically climate change), and thereby support (or oppose) policies to combat them, based largely upon their worldviews along two discreet dimensions—“hierarchy-egalitarianism” and “individualism-communitarianism.”²³⁰ As predicted by cultural cognition theory and confirmed by experimentation, egalitarian communitarians (i.e., those who “favo[r] less regimented forms of social organization and greater collective attention to individual needs”) tend to believe in climate change and support policies aimed at it.²³¹ The opposite is true of hierarchical individualists (i.e., those who “tie[] authority to conspicuous social rankings and eschew[] collective interference with the decisions of individuals possessing such authority”).²³² However, Kahan’s analysis and experimentation focused on climate change as a collective environmental problem.²³³ One might expect a shift in focus to crime to alter the alignment of hierarchical individualists. Indeed, in other contexts, research suggests that hierarchists see crime as a danger to society, because, according to Kahan and Braman, “drugs are emblematic of deviancy.”²³⁴ Thus, if communicators emphasize the potential criminal implications, murderous climate policy on the part of the government or bad action on the part of emitters could likewise be emblematic of deviancy and worthy of eradicating to hierarchical individualists.

For this strategy to have the full desired effect, the criminal, rather than civil, nature of potential liability is critical. As some scholars have observed, and research has confirmed, when conduct is described as criminal (i.e., “criminalized”) people are more likely to find it morally prohibited and desire its suppression.²³⁵ The effect is not as clear if conduct simply results in tort liability.²³⁶ Some have suggested that this stigma distinction explains why prosecutors pursue criminal charges

230. Kahan et al. *supra* note 25, at 733–35; Donald Braman, Dan M. Kahan, Paul Slovic, John Gastil & Geoffrey L. Cohen, *The Second National Risk and Culture Study: Making Sense of—and Making Progress In—The American Culture War of Fact 2* (George Wash. Law Faculty Publ’ns & Other Works, Paper No. 211, 2000), http://scholarship.law.gwu.edu/faculty_publications/211.

231. Kahan et al., *supra* note 25, at 732.

232. *Id.*

233. *See id.*

234. Kahan & Braman, *supra* note 27, at 157.

235. *See* Bert I. Huang, *Law and Moral Dilemmas the Trolley Problem Mysteries*, 130 HARV. L. REV. 659, 690–92 (2016) (reviewing F.M. KAMM, *THE TROLLEY PROBLEM MYSTERIES* (2015)).

236. *See id.* at 678 n.81 (citing ARTHUR RIPSTEIN, *PRIVATE WRONGS* 6 (2016) (providing an account of tort law that “start[s] from the moral idea that no person is in charge of another”); John C.P. Goldberg & Benjamin C. Zipursky, *Torts as Wrongs*, 88 TEX. L. REV. 917, 919 (2010) (recognizing torts as “legal wrongs rather than moral wrongs”)) (“Whether civil wrongs are so readily mapped onto moral prohibitions is more controversial.”).

against corporations when the available civil and criminal monetary sanctions do not differ.²³⁷ The famous Henry M. Hart, Jr., trying to distill a principled distinction between civil and criminal law beyond the tautological "a crime is anything which is *called* a crime,"²³⁸ posited that a crime "is conduct which, if duly shown to have taken place, will incur a formal and solemn pronouncement of the moral condemnation of the community."²³⁹ Thus, following Hart's logic leads to the conclusion that what is called a crime are those acts that the community deems deserving of moral condemnation. Moral condemnation is the bread and butter of hierarchical individualists; it provides clear demarcation between good and bad people, those deserving of success and those not.

This understanding of the moral import of the label of "crime" is consistent with other classical understandings of crime and punishment and the rule of law; key concepts for hierarchical thinkers. As Wolfgang Friedmann wrote, "the main purpose of a [criminal] fine is not primarily to hurt the defendant financially . . . [i]t is to attach a stigma."²⁴⁰ Importantly, that stigma can attach before a conviction ever occurs²⁴¹ and can attach to government entities, not just other persons.²⁴² Thus, discussion of the potential criminality of environmental policy decisions could add significant and compelling weight to policy communication, especially with groups whose worldviews place a higher degree of importance on morality, the rule of law, and individual responsibility.

237. Cohen, *supra* note 125, at 1060 ("The apparent moral stigma attached to being labeled a 'criminal' might also help to explain why the government insists on criminal charges for corporations that could receive identical monetary and non-monetary sanctions under civil and administrative remedies."); see also Green, *supra* note 20, at 1234-35 ("Unless criminal fines and probation further some policy goal that civil fines do not, there would be no logical explanation for their being applied to municipalities."); Susan Hedman, *Expressive Functions of Criminal Sanctions in Environmental Law*, 59 GEO. WASH. L. REV. 889, 889 (1991) (arguing that the criminal law has a "unique capacity" to "shame those who violate society's increasingly strict norms of environmental protection").

238. Henry M. Hart, Jr., *The Aims of the Criminal Law*, 23 LAW & CONTEMP. PROBS. 401, 404 (1958).

239. *Id.* at 405.

240. FRIEDMANN, *supra* note 73, at 211.

241. See generally William J. Leedom, *Removing the Stigma of Arrest: The Courts, the Legislatures and Unconvicted Arrestees*, 47 WASH. L. REV. 659 (1972) (discussing the stigma of arrest and pre-trial detention).

242. See Green, *supra* note 20, at 1234 (arguing that "local governments can be the appropriate object of the stigma and moral condemnation that usually accompany criminal prosecution").

VI. APPLICATION OF THIS FRAMEWORK AND ANALYSIS TO CONTEMPORARY ENVIRONMENTAL POLICY DECISIONS

Decisions about environmental policy are made every day, and the analysis laid out in this article could inform each and every one of them. Looking at a few prominent examples will illustrate how policymakers, and one prosecutor in Michigan, might make use of the framework provided.

A. *Climate Change and the Clean Power Plan*

Long before President Donald J. Trump's administration, the United States government's inaction on climate change had been described as a crime by some politicians and academics.²⁴³ Such rhetorical flourishes do not necessarily signal that the elements of a crime were present, or provable, but they do indicate that at least some responsible actors may recognize the potential for criminal culpability in environmental decision-making. In particular, green criminologists classified the denial of climate change and the failure to adopt mitigation and adaptation policies at the insistence of industry lobbyists as state-corporate crime.²⁴⁴ The Obama administration eventually changed course on at least some of the inaction that prompted the criminal accusations, but those policies are now set to shift back in the other direction.

The Clean Power Plan was President Obama's signature rulemaking with the objective of mitigating climate change by reducing carbon dioxide emissions from existing power plants.²⁴⁵ According to EPA's modeling, the Clean Power Plan, if fully implemented, would prevent 1,500 to 3,600 premature deaths annually.²⁴⁶ The Plan has been the subject of much litigation and its operation has been stayed by the Supreme Court.²⁴⁷ President Donald J. Trump's administration recently proposed a repeal of the Clean Power Plan.²⁴⁸ The proposed repeal is

243. Hans Joachim Schellnhuber, the chief climate advisor to the government of Germany, said the following about the George W. Bush administration's inaction on climate change: "This was a crime." MARK HERTSGAARD, *HOT: LIVING THROUGH THE NEXT FIFTY YEARS ON EARTH* 254 (2011).

244. Kramer & Michalowski, *supra* note 13, at 71; *see also* Lynch et al., *supra* note 10, at 215–16.

245. *See* Obama, *supra* note 2.

246. *See* *FACT SHEET: Clean Power Plan By The Numbers*, U.S. ENVTL. PROT. AGENCY, <https://archive.epa.gov/epa/cleanpowerplan/fact-sheet-clean-power-plan-numbers.html> (last visited Nov. 17, 2017).

247. *Chamber of Commerce v. EPA*, No. 15-1363 (U.S. Feb. 9, 2016) (order granting stay).

248. *See* *Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 82 Fed. Reg. 48,035 (proposed Oct. 16, 2017) (to be codified at 40 C.F.R. pt. 60).

based on the administration's view that the design of the Clean Power Plan exceeded EPA's authority under the Clean Air Act, but, importantly, it is not based on a determination that EPA cannot, or should not, regulate greenhouse gases altogether.²⁴⁹ Thus, if the repeal rule becomes final, EPA will have to decide whether to propose a new rule providing emission guidelines for existing sources that reflect the "best system of emission reduction" (BSER).²⁵⁰ Many factors will undoubtedly influence whether, and how, EPA decides to replace the Clean Power Plan. Among those factors should be the organizational culpability for the resultant loss of human life. As in the criminal law, the degree of certainty with respect to the resultant loss of statistical lives (as described in the documents providing support for the rule) should be directly relevant to the degree of culpability attributed to EPA, and the administration more broadly.²⁵¹ Society should be aware of the level of certainty at which EPA is acting to the detriment of human lives and hold EPA, and other governmental actors, accountable, if not in a court of law, then in the court of public opinion.

B. Other Air Pollutants

Other recently implemented air pollution regulations now face similar scrutiny and potential reversal. EPA modeled the expected effects of most of such rules, including two of the most prominent rules facing scrutiny—the Mercury Air Toxics Standards (MATS)²⁵² and the Cross-State Air Pollution Rule (CSAPR).²⁵³ According to EPA models, MATS, if it remains in force, will prevent between 4,200 and 11,000 premature deaths.²⁵⁴ It necessarily follows that EPA consequently knows that a repeal of MATS will end at least 4,200 lives yearly. Similarly, albeit on a smaller scale, EPA projects that CSAPR will prevent up to 60 premature deaths every year.²⁵⁵ Thus, for each year that EPA delays or rescinds its

249. *See id.* at 48,038–43.

250. *See id.* at 48,037.

251. The potential defense of "superior orders" (i.e., that EPA was just following the orders of the President and, therefore, not independently culpable) should not apply here. It is relatively well known and reported in the news media that EPA Administrator Scott Pruitt has been responsible for the major decisions of the Agency. *See, e.g.,* Coral Davenport & Eric Lipton, *Staff Tells of Rampant Secrecy at Pruitt's E.P.A.*, N.Y. TIMES, Aug. 12, 2017, at A1.

252. 40 C.F.R. §§ 63.5480–.5610 (2017).

253. 40 C.F.R. §§ 52.01–.2922, 78.1–.20, 97.1–.935.

254. *Mercury and Air Toxics Standard: Healthier Americans*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/mats/healthier-americans> (last visited Nov. 17, 2017).

255. *FACT SHEET: Final Cross-State Air Pollution Rule Update for the 2008 NAAQS*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/sites/production/files/2017-06/documents/final_finalcsaprur_factsheet.pdf (last visited Dec. 14, 2017).

implementation, the Agency knows that its actions will end as many as 60 lives yearly.

If EPA proposes to do away with either, or both, of these rules, it will undoubtedly face political and legal opposition from elected representatives, non-profit organizations, and even private citizens. The prospect of criminal prosecution may act as another lever of influence. If EPA does elect to rescind MATS and/or CSAPR without implementing adequate replacement regulation, criminal prosecution provides an effective punishment and deterrence option. Criminal prosecution is an option that neither the fora of political debate nor civil courtroom proceedings can match in effectiveness on those two objectives.

C. Flint Water Supply

As told in some detail above,²⁵⁶ the story of Flint's water crisis is one of knowing government inaction of epic and disastrous proportions. It has prompted the first significant prosecution similar to the type theorized herein, with the only real difference being that the defendants are individual officials rather than government entities. The theory of that manslaughter case is essentially equivalent to what is suggested for the potential climate change and air regulations cases just discussed—regulators knew that lives would be lost if people faced exposure to a particular pollutant, knew that the exposure was almost certainly occurring through a particular pathway, and yet did nothing to prevent it. The information available to the charged Flint officials abounded and included such things as complaints from residents about the color, odor, and taste of the water;²⁵⁷ scientific studies of the water and of residents' health;²⁵⁸ and the suggested preventative measure and its cost.²⁵⁹ Based on that information, the officials allegedly knew that deaths would result and thus committed manslaughter by not acting. If convicted, the Flint case will set the precedent necessary to pursue other government officials and entities who knowingly select policies that will result in death when real alternative options exist.

VII. CONCLUSION

The moral implications of how we, as a society, manage the environment and natural resources have long been debated, but their existence has been widely acknowledged. The same cannot be said for the legal counterpart to those questions of morality—the criminal law as

256. See *supra* Section III.D.

257. See TODD FLOOD ET AL., *supra* note 181, at 5–8.

258. See *id.*

259. See Buford, *supra* note 155.

applied to decisions about the environment. It is no longer tenable to ignore the criminal implications of environmental policy decisions. Government entities responsible for such decisions are not meaningfully different from corporate entities found criminally responsible in other contexts. The law of criminal intent recognizes that such entities can act knowingly. Thanks to improvements in science and technology, what is known by a decision-making entity frequently includes the number of human lives that will be lost as a result of various policy options. Prosecutors and administrators are beginning to confront this reality, but can, and must, do more. If they act appropriately, the criminal law will provide a valuable tool for improving environmental policy.